

NEWSLINE

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JULIE KORHUMMEL/NEWSLINE

CNN's Chuck Afferback interviews Page Stoutland (right) on technologies to combat bioterrorism. Lab counterterrorism programs have been a popular subject of media reports since the Sept. 11 attacks.

Media keeps its spotlight on Lab

By Gordon Yano

NEWSLINE STAFF WRITER

Since the terror attacks on Sept. 11, newspapers, magazines, TV and radio have been filled with stories about the events and their aftermath, including the anthrax mailings.

Many of those stories have focused on what the government is doing to combat terrorism. And many of the reporters writing those stories have turned to the Laboratory for information.

"It's been a whirlwind of television cameras, radio sessions and newspaper interviews, but this

research is more vital than ever and it's important that we share what we can with the public," said Page Stoutland, who as deputy division leader for counterterrorism and incident response in NAI, has often been called upon to speak to reporters.

Biology & Biotechnology Program Acting Associate Director Bert Weinstein has also been the subject of numerous news media interviews, often providing reporters with primers on pathogen biology and detection, as well as overviews of the program's DNA signature

See MEDIA, page 8

Lab researchers develop rapid-detection method for identifying salmonella

By Stephen Wampler

NEWSLINE STAFF WRITER

Salmonella may soon be identified within hours, rather than as long as a couple weeks, thanks to a rapid-detection technique developed by Laboratory researchers.

A paper by biomedical scientists Peter Agron and Gary Andersen about their development of a DNA-based detection system will appear in Thursday's edition of the journal *Applied & Environmental Microbiology*.

The scientists' technique is expected to cut the time for the detection of salmonella from days, or even as long as two weeks in some cases, to possibly as little as two hours.

While people who eat raw eggs in Caesar salads or egg nog are at increased risk for contracting salmonella food poisoning, that risk may become much less in the near future because of this technology.

Co-authors on the paper are Jessica Wollard of Livermore, along with Richard Walker, Sheryllyn Sawyer and Dawn Hayes of the California Animal Health & Food Safety Laboratory in Davis, and Hailu Kinde of the California Animal Health & Food Safety Laboratory in San Bernardino.

In a yearlong effort, Agron and Andersen identified several potential unique strands of DNA in a strain of salmonella known as salmonella enteritidis. Those pieces of DNA were then compared with the genomes from other strains of salmonella closely related to salmonella enteritidis to ensure they were unique to the enteritidis strain.

The most common pathogen of eggs, salmonella

See SALMONELLA, page 7

Sequencing of pufferfish will help JGI efforts to solve mysteries of human genome

By Anne M. Stark

NEWSLINE STAFF WRITER

The recent sequencing of the Japanese pufferfish *Fugu rubripes* provides a plethora of information that will help researchers master the ins and outs embedded in the human genome.

An international research consortium — which was led by the U.S. Department of Energy's Joint Genome Institute and the Singapore Biomedical Research Council's Institute for Molecular and Cell Biology — announced the completion of the *Fugu* genome at last week's 13th International Genome Sequencing and Analysis Conference in San Diego. Other members of the consortium are MRC UK Human Genome Mapping Resource

See PUFFERFISH, page 7



JACQUELINE MCBRIDE/TID

Under Secretary Robert Card visits Lab

Robert Card (second from right), under secretary for the Department of Energy, came to the Lab Tuesday for an overview of programs and tours of select facilities. During his visit, Director Bruce Tarter (right) and NIF Programs Manager Ed Moses took Card on a tour of NIF. Card also received a science demonstration on the Accelerated Strategic Computing Initiative, as well as updates on national security work and environmental technology developments.



Space, science
Saturday lands at Lab

— Page 2



Changes for
Comp directorate

— Page 3



HOME Campaign
off to the races

— Page 5



LAB COMMUNITY NEWS

Weekly Calendar

Technical Meeting Calendar, page 4

Saturday
3

A **power outage** is scheduled from 7 a.m. to 3:30 p.m. in the following locations: Bldgs. 411 and 412; and Trailers 4161, 4180, 4181, 4182 and 4184. There will also be a scheduled power outage on Sunday, from 7 a.m. to 3:30 p.m. in Bldg. 321. Contact: Mark Cardoza, 3-0490.

...

Award-winning **Russian-Canadian concert pianist Alexander Tselyakov** will perform on Nov. 3, at 8 p.m. in Livermore at First Presbyterian Church, Fourth and L streets. The performance will include works by Tchaikovsky, Scriabin and Rachmaninoff. Tickets are \$12 for adults, \$9 for seniors/students, and free for youth through high school. Contact: Del Valle Fine Arts, 447-2752.

Monday
5

An **Open Enrollment benefits fair** is scheduled from 2-5 p.m. in the west Cafeteria. This is your opportunity to get firsthand information on benefits from the insurance carriers. UC Savings Program, representatives from Social Security, UNCLA and Cal State 9 Credit Unions will also be on hand. Open Enrollment is Nov. 1-30.

Thursday
8

Get a jump on your holiday shopping at the 18th Annual **Merry Old Holiday Faire**, 11 a.m. - 7 p.m., at the Barn (3131 Pacific Ave., Livermore). More than 55 artists and artisans will offer such treasures as stained glass, jewelry, woodworking, fabric arts, unique foods, and more. Live entertainment is also included in this free event. Hot and cold meals and snacks will be available for purchase. Contact: LLESA, 2-9402.

Up
Coming

The LLESA **Rubber Stamping Networking Group** is holding two "stamp camps," Saturday Nov. 10 and Saturday, Dec.

8. The fee is \$15 each, which covers the cost of materials. Sessions will meet in the South Cafeteria between 10:30 a.m. and 3 p.m., or until you finish your projects. Registration deadline is Tuesday, Nov. 6, for the November camp and Tuesday, Dec. 4, for the December camp. Family members or other guests (U.S. citizens only) are welcome, but they must be pre-registered and have a picture ID for access on site. Contact: Terry Griffin, 2-6684.



Lab TV

Broadcast
Schedule

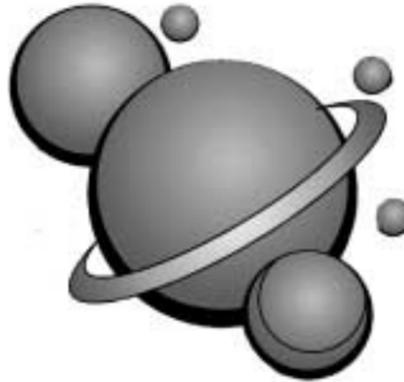
Two recent "Technology Today" shows will be shown for two weeks on Lab TV channel 7 beginning Monday. "**Terrorists**" will air Monday through Friday at 10 a.m., 2 and 4 p.m.; "**Anthrax Related Issues**" will air at 10:30 a.m., 2:30 and 4:30 p.m.

Visitors Center hosts Saturday space event

The Laboratory's Visitors Center will hold the first in a series of special Saturday events on Nov. 10, with "Space and Science Saturday" from 10 a.m. to 2 p.m. at the Lab's Visitors Center (Bldg. 651) and adjoining area.

Open to all Laboratory employees and their families, as well as the public, the event will highlight displays and hands-on activities for children from Oakland's Chabot Space & Science Center.

Visitors Center coordinator Linda Lucchetti



<http://www.llnl.gov/llnl/06news/Community/expo.html>

said that the Saturday event is an effort to attract more families and community members to the center, which currently is open weekdays from 1 to 4 p.m.

A program on the Lab's Guidestar project, as well as other new Visitors Center displays will be featured. Merchandise from the LLESA Time Zone will be on sale.

For more information, contact Linda Lucchetti at 2-5815, or go to the Web at

'Men of Honor' inspiration to speak at the Laboratory

In honor of Veterans Day, the Laboratory has invited guest speaker Carl Brashear, the first African-American master diver in the U.S. Navy and the inspiration for the movie "Men of Honor," to speak on Tuesday, Nov. 13, at 11 a.m. in the Bldg. 123 auditorium.

This talk, co-sponsored by the Affirmative Action & Diversity Program and the LLNL Armed Forces Veterans Association, is open only to employees.

Born in 1931 to a sharecropper family in Kentucky, Brashear joined the Navy in 1948 at the age of 17, the same year President Truman desegregated the U.S. military. Although assigned to the galley, he dreamed of becoming a deep-sea diver, which was unheard of for a black sailor at that time.

Once admitted to the Navy Dive School, he had to overcome the limits of a seventh grade education. He persevered until his ability and skill earned him the equal standing he deserved. His tenacity and indomitable spirit kept him

focused through years of adversity, exclusion and resistance.

Brashear went on to a notable career as a Navy diver and earned a master diver certification, despite losing half his left leg during the recovery of a nuclear warhead in the Mediterranean. In 1998, he became one of only seven enlisted men in history to be enshrined in naval archives, with a 164-page volume transcribing an oral history of his life and career.

In August, he was presented with the Veterans of Foreign Wars of the United States 2001 VFW Armed Forces Award. It is presented to recognize extraordinary achievement by members of the U.S. Armed Forces. Gen. Colin Powell received the same award in 1988.

Brashear's life inspired the recently released movie, "Men of Honor," featuring Robert DeNiro and Cuba Gooding Jr., who portrayed Brashear.

For more information about this talk, contact Michele Cardenas in AADP at 3-2796.

IN MEMORIAM

John B. McLeod

John Burton McLeod, Compensation manager in Human Resources, died Oct. 19, at the age of 52.

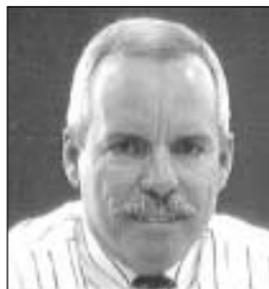
A resident of San Francisco, McLeod grew up in Sacramento and earned a degree in geography from UC Berkeley.

Prior to joining the Laboratory, he was the director of Compensation and Data Analysis at the UC Office of the President for nine years.

McLeod was an officer in the U.S. Navy and served in the Vietnam War. He served as president/board of directors for GALA Choruses in Washington D.C., Golden Gate Performing Arts and Golden Gate Choral Foundation in San Francisco, and the Seattle Men's Chorus.

In addition to choral singing, McLeod's interests included computers, skydiving, water skiing and civic affairs.

McLeod is survived by a long-term friend, Phill Barber of San Francisco, his mother, four sisters and one brother (including a triplet set). Services are pending.



John B. McLeod

Memorial services will be held at a 11 a.m. Saturday, Nov. 10, at Swedenborg Church, 2107 Lyon St. (at Washington), San Francisco. A reception at the church hall will follow the service. For more information, e-mail PJBarber@earthlink.net

Contributions in his memory may be made to Golden Gate Performing Arts, c/o Scott Mandell, executive director, 4053 18th St., San Francisco, 94114.

Newsline

Newsline is published weekly by the Internal Communications Department, Public Affairs Office, Lawrence Livermore National Laboratory (LLNL), for Laboratory employees and retirees.

Contacts:

Managing editor: Lynda Seaver, 3-3103

Contributing writers: Sheri Byrd, 2-2379; Don Johnston, 3-4902; Elizabeth Rajs, 4-5806; David Schwoegler, 2-6900; Anne Stark, 2-9799; Steve Wampler, 3-3107; Gordon Yano, 3-3117. For an extended list of Lab beats and contacts, see <http://www.llnl.gov/llnl/06news/NewsMedia/contact.html>

Graphic design: Julie Korhummel, 2-9709

Public Affairs Office: L-797 (Trailer 6527), LLNL, P.O. Box 808, Livermore, CA 94551-0808
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AROUND THE LAB



A new username standard for accessing Lab systems

With a growing list of LLNL applications and services requiring authentication by username and password, a long-term goal of the Information Architecture Project has been to simplify that process by providing a centralized authentication and account management service.

This would create a single credential that would be valid for all unclassified LLNL systems and services. Users who currently struggle to adequately protect and remember a plethora of usernames and passwords look forward to the achievement of this goal. An important step in that direction is the establishment of a standard identity for every LLNL user.

The Standard

After completing the "Request for Comment" period, Standard IA-1601 was approved by the Information Architecture Advisory Board (IAAB). The standard does the following:

1. defines the official username as the user's last name plus a sequence number (e.g., michels3@llnl.gov), which is assigned by LLNL when a person is hired;

2. creates a new identity for each person, the alternate username, which is a lower-case alphanumeric character string selectable by each user with a maximum of eight characters.

These user identities can only be changed when a change in the user's legal name forces a change in the username. The work required to change each instance of the alternate username



CIO UPDATE

—BY TED MICHELS

may be significant, so it should be selected to be as permanent as possible. The existing "e-mail alias," which many LLNL employees have, is not affected by this standard.

The full text of Standard IA-1601 is located at <http://ia.llnl.gov/standards/ia1601/ia1601.html>. Other standards that have been established by the IAAB and the process by which standards are developed and approved are described at: <http://ia.llnl.gov/standard.html>.

Implementation

The alternate username is intended to accommodate the limitations of legacy systems that are unable to accept usernames longer than eight characters. The use of the alternate username identity will be implemented across the Laboratory in two phases:

Phase One: Each person's alternate username will be preset by LLNL to match either the official username or e-mail alias if it does not exceed eight characters; otherwise it will be preset to blanks. This process began Nov. 1. Each person may select a new alternate username up until Feb. 1, at which time it will

become permanent and can never be reused. This time limit will not apply to alternate usernames that were preset to blanks.

The URL for selecting an alternate username is <https://www-oln.llnl.gov/autoreg/cgi-bin/autoreg.cgi>. Note: You will need an official ID and personal access code to access this page. Questions regarding the selection of an alternate username can be directed to the LC Hotline at 2-4531 (computing@llnl.gov).

Phase Two: After Feb. 1, nonblank alternate usernames can only be changed if a change in a person's legal name affects it. Alternate usernames will be available via PH as LLNL-only information. New hires will have their alternate usernames set to blanks until they select permanent ones. Selection of an alternate username will be a prerequisite for obtaining an account on any system that uses this identity.

Benefits

The use of these identities will reduce the amount of time required by system administrators to troubleshoot problems, simplify the authentication process for users, reduce duplication of effort to maintain user account databases, and ease the task of auditing. Questions regarding this standard can be directed to Barry Howard at 2-4030 (bhoward@llnl.gov) or Dave Osterman at 2-3499 (osterman@llnl.gov).

Ted Michels is the principal deputy associate director for Computation and LLNL's acting chief information officer (CIO).

Crawford reorganizes Computation to 'unify the directorate'

Dona Crawford, AD for Computation, announced a reorganization last week designed to "unify the directorate" and "enhance our ability to serve rapidly evolving Laboratory missions."

"The reorganized Computation Directorate will be more clearly focused with a common vision and mission," Crawford said. "Our goal is to deliver world-class computing and information capabilities to Laboratory programs."

One of the first changes will be the creation of a chief information officer (CIO) deputy associate director for the Laboratory as recommended by a working group convened by Crawford at the request of Director Bruce Tarter. "The role of the Laboratory's chief information officer in addressing institutional information technology issues has grown in importance and now demands a full-time manager," Crawford noted.

Lab senior management has accepted this recommendation, and the new position has been posted. When the position was created in 1996, then Associate Director Dave Cooper served as both Computation AD and CIO.

The new CIO DAD will work with stakeholders and the Director's Office to determine the appropriate allocation of funds for a variety of institutional information technology initiatives.

Until a CIO DAD is selected, Ted C. Michels, Computation Directorate principal deputy AD, will continue as acting CIO.

The second major change is the realignment of the current three departments into two departments. "These departments will have well-defined, complementary roles and responsibilities, which will minimize mission overlap and increase cooperation," Crawford said in a memo distributed Oct. 25.

The two new departments are as follows:

- The Scientific Computing and Communications Department (SCCD) will combine with the Systems and Network Department (SND) to become the Integrated Computing and Communications (ICC) Department. However, the Center for Applied Scientific Computing will be moved from SCCD to another new department. This model consolidates all directorate computing and communications operations and services into the ICC. Michel G. McCoy, currently the deputy associate director for SCCD, will become the deputy associate director for ICC, effective immediately.

Integrated Computing and Communications consolidates expertise in high performance computing systems, networking support, desktop support and user services. Other activities include collaborative research and development with the new Computer Applications and Research Department and industrial partnerships.

"Our goals include desktop to teraflop scientific computing and providing unified information services support," Crawford said.

- The Computer Applications Organization (CAO) plus the Center for Applied Scientific Computing (CASC) will become the Computing Applications and Research (CAR) Department. This model combines directorate



Dona Crawford

research and applications development activities into one organization, "thereby improving synergy between the two." Steven F. Ashby, currently the director of CASC, will become the acting deputy associate director for CAR. This position has been posted.

CAR provides computer science expertise and does collaborative research. The department has discipline expertise in software engineering, applications development, computer science and mathematics R&D. The department will collaborate with Lab programs in computational science investigations.

Other activities include academic collaborations, student and visitor programs and managing the Computation Directorate research portfolio.

Other leadership changes include:

- Bill Warren, currently the DAD for the Computer Applications Organization, will become the Computation Directorate Assurance manager.

- Brenda Turteltaub, currently the DAD for the Systems and Network Department, will assume the role of deputy CIO.

Crawford lauded Warren for his "leadership of the Computer Applications Organization over the past year and a half and for his continued commitment to the directorate," and Turteltaub for her "leadership in the formation and development of the Systems and Network Department."



NEWS YOU CAN USE

Find the fire hazards



Identify at least seven fire hazards depicted on this poster. Prizes will go to the first 150 entrants with seven correct answers. All entrants with seven correct answers will be eligible to win the grand prize. Drawing will be held later this month. Go to the ES&H Website at www-r.llnl.gov/es_and_h/, click on "safety contest" in the "News" section. Print and fill out the form, or write your answers on a sheet of paper, along with your name and L-code. Send to Fire Safety Contest, L-088. Deadline is today. Look for the answers in *Newsline*.

Open Enrollment for benefit changes

Open Enrollment is your opportunity to transfer to a different medical or dental plan or add eligible family members to your current plans. You may also enroll in or opt out of UC-sponsored medical, dental, and vision plans, as well as change participation in the Dependent Care Assistance Program (DepCare) and the Tax Savings on Insurance Premiums (TIP) program.

Open Enrollment will be held through Nov. 30. Employees eligible for full or mid-level benefits can make Open Enrollment changes through the Open Enrollment Action Line; transactions must be completed by midnight (PST) on Nov. 30. Core employees must use forms to make their changes, and the forms must be received in the Benefits Office by 5 p.m. Nov. 30. You may not make Open Enrollment changes to UC-sponsored plans after these times.

All Open Enrollment changes will be effective January 1, 2002.

Benefits Information

By now, you should have received an Open Enrollment announcement along with a personalized statement showing your current coverage. The announcement includes highlights and premium costs for 2002.

Detailed information about Open Enrollment is available on a special HR/Benefits Open Enrollment Website at http://www.llnl.gov/llnl/02employment/benefits/open_enrollment.htm. This site includes descriptions of plan changes for 2002, side-by-side comparisons of plan benefits, prescription drug formularies, and instructions and worksheets for making changes by telephone.

If you don't have Internet access, you can have printed materials sent to you by returning the postcard included in your Open Enrollment mailing. To guarantee timely delivery, UC will accept postcard

requests only through Nov. 23.

In addition to the Website, information can also be obtained at the LLNL Benefits Fair, from 2-5 p.m. on Monday in the West Cafeteria. Plan representatives will be on-hand to answer questions and a limited supply of plan materials will be available.

2002 plan highlights

In the face of skyrocketing costs throughout the health care industry, UC has had to make some difficult choices in order to keep costs as low as possible. In 2002 you will see increased medical plan co-payments and other changes that were made in order to contain employee monthly premiums.

Also, UC is extending indefinitely its 2001 pilot program that allows transfer among California HMOs at any time during the year. The program has helped to address concerns about medical plan provider/network disruptions.

In addition to the medical plan changes, there are some benefit improvements in the dental and vision plans, as well as a 2 percent rate reduction for the Supplemental Life Plan. You can find more information about plan changes in the Open Enrollment mailing and on the HR/Benefits Website.

Salary reduction programs

The Dependent Care Assistance Program (DepCare) allows you to pay eligible dependent care expenses on a pretax, salary reduction basis. During Open Enrollment you can enroll in DepCare or change or cancel your DepCare salary reduction amount.

Tax Savings on Insurance Premiums (TIP) allows you to pay your health plan premiums, if any, on a pretax, salary reduction basis. Participation in TIP is automatic. During Open Enrollment you may reenroll in or opt out of TIP.

Technical Meeting Calendar

Friday
2

INSTITUTE FOR GEOPHYSICS & PLANETARY PHYSICS

"Particle Transport and Abundance Anomalies in Main Sequence, Horizontal Branch

and Pop II Stars," by Georges Michaud, Universite de Montreal. Noon, Bldg. 319, room 205 (open area, badging required). Contact: Joanna Allen, 3-0621.

Monday
5

H DIVISION

"Some Properties of Dense Hydrogen," by Jean Clerouin, Atomic Energy Commission/France. 10 a.m., Bldg. 219, room 163 (uncleared area).

Contacts: Giulia Galli, 3-4223, or Darlene Klein, 4-4844.

DEPARTMENT OF APPLIED SCIENCE

"Ultra-Wideband Communications," by Farid Dowl. 4 p.m., Bldg. 661 (Hertz Hall), room 7 (open area). Refreshments served at 3:30 p.m. for a "meet the speaker" session before seminar and at 5 p.m. after the seminar. Contact: Estelle Miller, 2-9787.

Tuesday
6

INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH

"Morse Complexes and Topological Persistence," by Herbert Edelsbrunner, Duke University. 10 a.m., Bldg. 451, room 1025

(uncleared area). Contacts: Valerio Pascucci, 3-9422, or Leslie Bills, 3-8927.

Wednesday
7

MATERIALS RESEARCH INSTITUTE

"Conical Intersections and the Profound Effect on Nuclear Motion," by David Yarkony, The

Johns Hopkins University. 3:30 p.m., Bldg. 219, room 163 (open area, badge required). Laura E. Martinez, 2-0620.

Thursday
8

V DIVISION

"Applications of Advanced Theoretical L-Shell Spectroscopy," by Stephanie Hansen, University of Nevada. 10:30 p.m., Bldg. 219,

room 163 (open area, badge required). Contact: Kevin Fournier, 3-6129.

Friday
9

H DIVISION

"First Principles Calculations of SiO₂ Atomic Layer Deposition and Molecular Nanowires on (100) Silicon," by J. Kang,

Stanford University. 10 a.m., Bldg. 319, room 205 (open area, badge required). Contact: Darlene Henry Klein, klein13@llnl.gov.

INSTITUTE FOR LASER SCIENCE & APPLICATIONS

"Recent Results from Fokker-Planck Plasma Simulations," by Jean-Pierre Matte, INRS-

Energie et Materiaux. 10 a.m., Bldg. 219, room 163 (open area, badge required). Contact: Maryann Soby, 3-1102.

INSTITUTE FOR GEOPHYSICS & PLANETARY PHYSICS

"Deep X-Ray Surveys: Obscured Quasars and the X-Ray Background," by Daniel Stern, Jet Propulsion Laboratory. Noon, Bldg. 319, room 205. Contact: Joanna Allen, 3-0621.

DEFENSE & NUCLEAR TECHNOLOGIES

"Modern 2D and 3D Full-System Analysis of the Baseball Event," by Robert Weaver, Los Alamos National Laboratory. 10:30 a.m., Bldg. 132, room 1000 (cleared area). Contacts: Linda Stuart, 3-7001, or Mark Herrmann, 2-6999.

The deadline for the next Technical Meeting Calendar is noon, Wednesday.

Send your input to tmc-submit@llnl.gov. For information on electronic mail or the newsgroup llnl.meeting, contact the registrar at registrar@llnl.gov.

NEWS OF NOTE



Shuler gave annual Run for HOME its jump-start

By Don Johnston
NEWSLINE STAFF WRITER

Jean Shuler has run full circle with this year's Run for HOME.

Shuler was among those who ran in the first run kicking off the Laboratory's annual campaign to Help Others More Effectively, or HOME, in the late '70s. "I think I've run in every run for HOME. It has really been a fun thing over the years."

Shuler, leader of Computation's Customer Service and Support Group, is one of those responsible for organizing this year's race.

The Run for Home began in the late 1970s when organizers of the campaign to raise funds for local non-profits asked the Lab employee association's Roadrunners group to hold one of their biannual divisional competitions on Halloween as part of a HOME event.

"At that time we had divisional races twice a year in the spring and fall," Shuler recalls. "The races were very competitive."

Roadrunners organized races at the Laboratory and participated in regional corporate competitions, she said, and a Lab team won a national corporate championship in New York City in the early 1980s.

"The Lab fielded great teams for those corpo-



From left: Joe Choy, Eric Strobene, Jean Shuler, Mike McCoy, Barry Howard and Alek Shestakov in 1976, when they challenged B Division in one of the first divisional competitions. The race later became part of the HOME campaign.

rate races," she said.

Men's and women's races were also segregated in the early days of divisional racing with women starting first, Shuler said. "There'd be this stampede of men coming up behind us. It was really scary.

"In the beginning we still thought of the Run for HOME as a divisional race. The important

thing was which division finished with the highest score," she said.

Dan Moore, now a retired statistician in Biology and Bio technology Research Programs, devised a point system for the divisional races and kept careful records of the team standings. With some amusement, Shuler recalls that Moore changed the "Masters" runner category to over 50 when he reached that age. "He and I always won when the masters was over 40," she said. "And we continued to win in the over 50."

Early races were run from the parking lot of Bldg. 111 to the Visitors Center on Greenville Road, but the finish line was moved to the Lab pool area and distances have varied over the years. Now the finish line ends close to the starting line near Bldg. 111.

"The Roadrunners gave prizes," she said, adding that costumes became a part the HOME run tradition and a prize category.

Shuler said it was her Lab colleagues who got her into running, notably Joe Choy of what was then the Computation Department. "The divisional competitions got me and a lot of people here started," she said. "And I'm still running."



HOME Campaign is off and running

Runners, rollerbladers, walkers and swimmers gathered Wednesday for the annual Run for HOME and Agency Fair, which kicks off the annual HOME Campaign. Deputy Director Michael Anastasio (right) kicked off the race, which attracted several participants, such as Ted Michels and Sue Wiebe (left), dressed in costume. This year's run and fair had a circus theme. This year's race winners are: swim — Steve Lee, Christy Michelsen, Jerry Schweickert, Bryon Bollinger; Skate — Steven Taylor, Cindy Chepanoske; Run — Willey Trevor, Beth Vitalis, Jim Jones, Jean Shuler. Awards for costumes were also handed out. Meanwhile at Site 300, a similar race was held. The HOME Campaign, the Lab's effort to raise money for local charities, runs through Dec. 7. This year's goal is \$1.3 million. For more information about the campaign, see the Website at <http://www-r.llnl.gov/home2001/>

PHOTOS BY MARCIA JOHNSON/TID





CLASSIFIED ADS

See complete classified ad listings at
<https://www-ais.llnl.gov/newsline/ads/>

AUTOMOBILES

1995 - T-Bird-V8 4.6 Liter, Automatic, Low Mileage AC/PS/AM/FM Cassette Dual Air-Bags, Power Seat, Rear Spoiler \$7,300 o.b.o. 925-449-8959

1986 - Ford Bronco XLT 4WD fair condition, 220K miles \$2,500. 209-823-5169

1982 - Toyota Cressida, 215K AT,AC,All Power, Cruise, Slight left front damage, all records, \$1400 still strong and solid 209-835-2416

1989 - Acura Integra, 4 door, grey, air, power windows, 5 speed, original owner, all maintenance records, lots of miles but it runs and looks great, \$2,600 925-484-4099

1985 - Buick Regal Sedan; PS, PB, AT; good condition; just smogged. \$1800/OBO 925-462-6308

2001 - Saturn L200 4Door A/T Fullyloaded Alloys Green/Tan Lowmiles only 1,875 miles Warranty \$14,500.00 O.B.O. 209-522-0754

1992 - Nissan Pathfinder XE 4x4 5sp, ac, hitch, roof/ski rack, 133K mi, paint/int/mech all in very good cond. \$5500 925-249-1116

1992 - Honda Accord LX 4dr, 5 Speed, 134K miles, new clutch, Air, Power Mirror, Windows, Steering. 1 Owner. All records. \$5500 OBO 510-430-1736

1989 - Pontiac Bonneville LE, 177000K, ac (needs freon), AM/FM cassette, power wind&door, new start&alt&bat. 3.8 liter eng&trans should go another 100K. 925-829-1794

2001 - Honda Accord EX,5spd, 11K miles, tinted windows, pwr everything, sunroof, 6 disc changer in dash, \$21,800. 925-784-5505

1986 - Toyota van. Brown color. 135K miles. Runs well. Body has misc small dents. \$3,800 OBO. 925-455-1719

1989 - GMC Suburban. Silver-blue color. 3rd seat. 1 owner. \$6800. 925-449-9740

1994 - FORD ESCORT GT Hatchback, 5 Spd, AC, PS, PW, PDL, AM/FM/CD, CC, ABS, Alloy Wheels, Sun Roof, Spoiler, 68K, Fun car to drive, \$4500 OBO 925-373-2516

1996 - Pontiac Bonneville,82K miles,v-6, Automatic, Power seat, windows, locks, Michelins, Mags Very Good condition \$6500 530-644-6160

1995 - 1995 EAGLE TALON TSI 5 SPD. Turbo-Lowered-Custom Stereo and Rims Sunroof, PW,-PDL.Imac.Cond.(BLK} 80,000 Miles Asking \$13,500 925-292-0045

2001 - Jeep Wrangler Sahara Edition. Soft and hard tops. 8,000 miles, fully loaded. Asking \$23,000. 925-449-7066

1991 - Geo Storm, 5 speed, red, good condition, \$3200 925-373-0173

1997 - Jeep Cherokee Country, 4x4, White, excellent condition, Laredo (loaded) and tow packages, new tires. Must sell, asking below blue book, \$9,750. 209-832-2099

1996 - Plymouth Voyager Van Rallye SE, 97K miles, 3K remaining on 100K warranty. Excellent cond. 7 Passenger, 5 door, one owner. \$9,900. 925-413-7908

1993 - Acura Legend, great condition, loaded, automatic, a/c, professionally maintained, 119K mi. very clean, \$9500 obo. 925-447-9754

1992 - F150 4X4, rebuilt transfer case, engine. New windshield, tires, battery. Transmission OK but no over-drive. Minor body damage. Runs good.\$2100 obo. 925-243-1607

1979 - Datsun 280 ZX. 146,000 miles, mechanically restored, new tires, great condition. \$4,500 or best offer. 925-820-4858

1999 - Chevy Camero, Beautiful 2-door Coupe, Red, Excellent Condition, 12 Changer CD &

Cassette, Power Windows & Doors - Low Mileage. \$14,395. 925-484-2217

AUTOMOBILE ACCESSORIES

15 inch Truck WHEELS, Six bolt steel, all 4 for \$60, or 2 for \$40. 925-447-7070

Side bed caps for Ford F-series trucks with 6 foot bed, new in box, \$40. I also have hiding tie down hooks that fit all Ford trucks, \$30. 925-484-4099

Jeep Wrangler Security Pet Gate, Easy Installation, No Drilling, Rubber Padded Tension Mounts, Still in Original Box \$50.00 925-963-7869

Torque wrench (unused), induction tune-up dwell meter, induction timing light. Make offer 925-292-7799

2000 Toyota Tundra 4X4 Limited. Factory alloy wheel for sale. Looking for a wheel so you can rotate the spare? Only one left for \$90. 925-455-4528 925-455-4528

Tires and aluminum alloy rims. P265/75 16 inch 6 lug off Chevrolet Tahoe. good tread. \$375 925-447-4611

40 year collection of VW parts. Engines, Trans, Fenders etc. All for \$200 209-835-3352

Brand New, Still in Box. AUTO NOSE BRA, fits 1993-1997 Also Chev CAMERO Z28 1993-1995 Blue CAR COVER. Both for 190.00 or 100.00 each. 209-988-6373

15x7 MAG WHEELS, four bolt, fit Ford, 1988 Mustang, others only \$60 for all 4 925-447-7070

BICYCLES

Bicycle for 6-10 year old girl. Specialized trail or road bike. Good condition. Name a price and it is yours. 925-455-1747

Diamondback, Photon, BMX type bike, 20 inch wheels, good condition, \$120, 209-835-8791

BOATS

1992 model SP Seadoo jet ski in great shape \$2500, 209-887-3029

1974 Caravelle,new floor,gas tank,upholstery, 302 v8,merc.888 od.Stored inside unshed 1981 - 1998.Excellent running.\$2400.00 firm. 209-836-0631

4 HP Mercury outboard-\$75 925-447-8804

ELECTRONIC EQUIPMENT

Mac Classic computer. Barely used. Best offer. 925-455-1719

Fisher studio standard dig.FM receiver,sony dual cassette deck,single CD player,2 large reflex fisher speakers.Excellent cond \$150.00 OBO 925-371-6592

GIVEAWAY

Used aluminum windows, vairous sizes and shapes. Might be usefull for building a greenhouse or other glass projects. 925-373-0626

HOUSEHOLD

Entertainment center, 67H x 54w x 18d, glass cabinets w/shelves, two drawers, separate shelves for TV and DVD/VCR player, medium-dark wood. \$100/BO. 925-443-2821

Hoover Elite vaccum with attachments. Runs great! \$30.00 510-537-7222

Cherrywood entertainment center; holds tv, vcr, tuner, cabinet for vcr tapes, etc. \$150/obo. Located in Livermore. 209-763-2888

Broyhill Fontana collection bedroom furniture (dresser, armoire, nightstand, and mirror) in excellent condition - all for \$750 925-803-9550

Diaper Genie for sale, \$10.00 925-

417-8894

Solid oak crib and matching changing table. Child Craft drop side crib comes with crib mattress. In Excellent condition, \$150.00 925-846-9258

Solid Oak 2 drawer filing cabinet. Legal/letter size. Excellent condition. Lockable. First \$75 takes it. 925-373-9128

22 Cu.Ft. Amana side by side Refrigerator and Freezer in very good condition. Color Beige. Price \$400 or best offer. 209-836-1506

Victorian Brass & Black day bed. Custom made. Like new. Comes with trundle and mattresses. \$350. 925-373-1521

Double size mattress, box springs & frame. No headboard. Almost new, excellent shape. \$75. 925-443-6058

Coffemaker 10-cup \$3 925-828-3295

Estate sale 11/3, 9-3. Antique radios & record player, furniture, kitchenware, numerous household items. 341 Andora Lane (off Bollinger), San Ramon 925-447-7255

Desk, white melamine, 65x30 with 3 drawers and corner storage unit with 2 shelves. Great condition. \$100. 925-455-5655

Beige Leather Sofa Very Good Condition \$250. Nightstand \$25. Coffee stand \$20.Call Eves: 925-828-6568

Living room chair-Hunter green with small design, high back. New condition. \$50.00 OBO. 925-443-9435

LOST & FOUND

Found sweater last week in B482 outside conference room 2274. 209-835-5475

Found, bracelet in front of B141, CRC area. 209-954-9853

MISCELLANEOUS

Plastic diaper changing table that fits over crib. Real space saver! \$5 925-417-8894

36D Bra: Full bodice, strapless bra, used once for a wedding. Originally \$35, asking \$10. Comes with snap-on straps. 925-417-8894

Walnut coffee and end tables in very good condition. \$50 Also, 4 Bar chairs. \$50 209-836-1506

The Phonics Game. \$90.00. 925-462-6308

New barber set, Smith Corona word processing electric typewriter, Sears heavyduty sander, scroll saw, or make offers. 925-292-7799

Like new respirator with face mask. Used once. Paid \$110.00. Asking \$75.00 obo 510-537-7222

Moving sale, Nov. 3, 8 am to 2 pm; 1431 Locust St., Livermore. Books, dishes, womens clothes, misc. furniture. Rain date Nov. 10. 925-443-6058

Nice children's climber. Swings, slide and climbing bars. Bought at COST-CO for \$500 four years ago. Will sell for \$250 OBO. 925-455-1719

Mattress & Box Spring, Long-Twin, with Frame, \$35. 925-447-6221

Washer & Dryer-Works perfectly.White large capacity. \$50.00 OBO 925-443-9435

MOTORCYCLES

2001 - Kawasaki Vulcan Nomad (brand new) 350 miles, \$2000 in extras, \$11,700 209-521-8977

MUSIC INSTRUMENTS

Suzuki violin, 1/4 size, Wolf violin headrest (1/2 size), Violin Strings, all like new. Make offer 925-292-7799

PETS & SUPPLIES

Two beautiful cats. Love each other and humans. Very young but nearly full grown. Neutered and have had shots. FREE. 925-455-1747

Wanted - young parakeet. 925-447-1954

Western saddle. 15 inch, \$300. Insulated saddle bags, \$50. Miscellaneous tack. Call 925-516-5636

WANTED:older western mare to lease or possibly purchase. Must be suitable for 7 yr old to show walk/jog in Arabian Shows. References available. 209-847-1231

Blue And Gold Macaw,2years Old, Beautiful Colors, Tame,Healthy, \$600/Obo. 925-449-8159

Cockatiels, 2-3 months old. Greys, Lutinos & Pearls. Friendly & tame \$35.00 each. Eves- 925-606-7128

Blue Front Amazon, hand tame, cage plus accessories. \$500 925-294-8632

Dachshund male,about one year old. Free to a good home.Moving, unable to take with us. 209-823-7696

RECREATION EQUIPMENT

Health Rider \$30 925-828-3295

Portable Basketball Backboard, good condition. \$50. 925-485-1988

Health Rider \$30 925-828-3295

Bow Flex XLT (w/ all attachments), seldom used. Excellent condition. Paid \$2000. Asking \$1200 OBO. 925-513-9019

RIDESHARING

Express your commute, call 2-RIDE for more information or visit <http://www-r.llnl.gov/tsmp>.

Modesto - 14 passenger luxury van. 8 - 4:30 schedule. \$113/mo. Additional savings if you want to help with the driving. 209-521-9047, ext. 2-5177

Cupertino/San Jose - Looking for a vanpool/carpool 8:00 - 4:45. Possible flexibility in hrs. 408-787-9992, ext. 4-4527

Ceres/Modesto - 14 psgr Enterprise deluxe van, 7:00-3:30, \$120/month 209-537-0229, ext. 3-6631

Danville - Near Camino Tassajara & Crow Canyon - 2 drivers/riders seeking additional member to carpool from south Danville, 8:00-4:45. 925-736-9441, ext. 2-1039

SERVICES

TUTORING in high school and college math and chemistry. 925-443-2095

Hauling Service. Estate Cleanouts, Attics, Garage, Shed & Barns. Misc.... 925-373-9540

FLOORING Carpet,linoleum, tile, stone. Licensed/bonded/insured; reasonable rates. 925-516-9510

SHARED HOUSING

TRACY - Furnished room avail immed in 4BR home. Priv phone/bath, Share kit/laundry. Util incl. \$450/mo. 209-833-1201

Modesto - Room for Rent, separate bath, pet okay, no smoking. \$300.00 209-537-8458

LIVERMORE - Area : Share your driveway-R/V space? NIF Engineer looking to park/stay-in his 5thWheel during week (only?). Current Commute fr:LosBanos too long! 209-827-6124

TRUCKS & TRAILERS

Fifth Wheel Trailer 1988 A/C, Microwave, Stereo, Sleeps six Electric Jaks. \$5000.00 925-828-3044

1993 - Suburban, looks and runs

great, loaded, below Bluebook, low miles, 10K. 925-454-1907

1996 - 34 ft. Gulfstream Sun Voyager motorhome - all the extras - 33,000 miles, \$44,000 209-521-8977

1987 - Toyota 4Runner, white, 4 WD, good condition, \$4500 209-835-6351

1979 - Chevy Luv pick-up, 4 cyl, manual trans, recent new ext. paint, runs good, original owner, see it in the LLNL lot \$1,900 510-538-7444

1996 - Ford Explorer XLT,Leather Int.,V6, auto, 4WD,66,000mi., AC,PS,CD,Moon roof,New tires, \$11,900. 925-371-0681

1989 - Nissan V6 King Cab pickup, 103K miles, AC, new tires, many extras, maintenance up-to-date, must see. 925-454-8827

1996 - Dodge Ram 2500 SLT/HD V-10 Long Bed, Club Cab 103,000 mi, Perfect Condition and Loaded with Extras. Original owner asking \$10,950.00 209-962-7431

1993 - Full size 2 door Blazer Silverado, Original owner, 11,500 925-634-6551

2000 - Toyota Tundra 4X4 Limited. Factory alloy wheel for sale. Looking for a wheel so you can rotate the spare? Only one left for \$90. 925-455-4528

VACATION RENTALS

Maui-Wailea Ekahi, 1 bdrm, 2 ba tropical beach resort. Available 12/1-9. Also large cabin in Arnold, CA. 510-582-9262

Palm Springs - --Hotel resort.1 or 2 bedrooms, sitting room w/queen-size sofabed, jacuzzi, fully equipped kitchen, charming and comfortable.\$120-160/day. 2-5630 or 925-606-5660

SQUAW VALLEY, LAKE TAHOE - - 1 bedroom timeshare condo available Thanksgiving week (11/18-25)at Olympic Village Inn. Sleeps 4, fully furnished, ski slopes. Asking reasonable rate 925-292-7799

Maui, HI - Kahana Reef oceanfront 1BR/1BA condominium. Beautiful two-island view, oceanside pool, and BBQs. Low LLNL rates for year-round reservations. 925-449-0761

SOUTH LAKE TAHOE - 3 Bedroom 2 Bath Chalet, nicely furnished,all amenities, Park with Lake, tennis etc.Off-season Rates! Reserve Holidays/Skiing Now! 209-599-4644

WANTED

Dear America, My America Scholastic Books. Will pay \$4/book for books I do not already have if they are in excellent condition; no writing. 925-417-8894

Rabbit hutch for large rabbit. 925-846-1906

Wanted - Shop manual for 1993 Toyota Camry 925-292-7799

Looking for someone to clean my Livermore home every other week. Flexible days; house is new, free of clutter and kept very neat. 925-455-4208

Stackable washer/dryer, gas. 408-768-5070

Looking for a Honda Civic 1993-96, automatic, A/C, for college student, reasonably priced. 925-373-0173

Wanted- Person to help with yardwork, painting, auto repair, odd jobs, weekends or evenings Livermore or Pleasanton 925-447-7070

Classified ads changes

Due to space restrictions in *Newsline*, classified ads will be limited to one page.



Lab's HOME efforts earn Community Champions Award

Hugh Watling, Roger Werne and Administration AD Jan Tulk (from left) accepted a Tri-Valley Community Champions Award from Tri-Valley Community Fund Chairman Richard Karn last week for the Lab's efforts on its annual HOME Campaign. Watling, of Engineering, was the chair of last year's campaign, while Werne, of NAI, chairs this year's campaign. For the last three years the campaign has raised more than \$3.5 million for local charities. The awards are presented annually to companies, organizations and individuals who contribute to the well-being of the community.

MARCIA JOHNSON/TID

SALMONELLA

Continued from page 1

enteritidis is estimated to be present in only about one in 10,000 or more eggs. This bacteria only becomes a problem, causing food poisoning for humans, when disease-carrying eggs have not been thoroughly cooked or are left unrefrigerated.

"It is difficult to distinguish this pathogenic salmonella from all of the other salmonella strains that do not cause disease and are not a problem," Andersen said, adding that neither the chickens or eggs with this bacteria show any symptoms of the disease.

Richard Walker, a professor of clinical microbiology at UC Davis and the California Animal Health & Food Safety Laboratory, has been using the Lab's diagnostic DNA signatures (or tests) for about six months.

Walker has been validating the new DNA-based detection system in a clinical setting, running the new tests in parallel with the classical, slower microbiological approach.

"So far, the Laboratory's DNA signatures look very good; they're promising," Walker said. "The primers (DNA copies) are very specific and provide tools that can speed up testing. They're very useful in screening out negative samples."

If the validation process continues to proceed well, the Livermore DNA-based detection system would likely be used by the California Animal Health & Food Safety Laboratory for future testing, Walker said.

The Livermore-developed detection technology would need to be evaluated and approved as an alternative to conventional testing by the federal Food & Drug Administration and the California Department of Food & Agriculture, according to Walker.

Current approach can take two weeks

In the classical microbiology approach to detect salmonella enteritidis or other pathogens, something that can take four or five days to a couple weeks, a sample is incubated in a broth over night. The sample is then grown in an agar plate for another night before suspicious colonies are picked out for several days of more refined testing.

Currently, the California Animal Health & Food Safety Laboratory tests with the Livermore system take about two days, although in the future tests could take as little as two hours.

As a part of their work, Agron and Andersen designed primers, or copies of short unique DNA regions of salmonella enteritidis that could be used in a polymerase chain reaction (PCR) machine.

Once a sample is inserted into a PCR instrument,

the primers seek out unique sequences of DNA, such as salmonella enteritidis.

If present, the primers attach themselves to the DNA and make billions of copies, indicating a positive reaction. If not, the primers have nothing to which to attach themselves, indicating absence of the pathogen.

With the Laboratory's DNA signatures for salmonella enteritidis, it may be possible to eliminate or drastically reduce the level of these bacterial infections, Andersen believes.

It may also be possible to track the source of the bacterial infections, whether they stem from feed, water, a manure pile or even processing equipment, according to Andersen.

"This technology could be used widely in the future. I think the day will come when virtually every poultry farm is analyzed for the presence of salmonella enteritidis."

The California Egg Commission provided about \$50,000 for the Laboratory's research and its development of the DNA signatures for salmonella enteritidis.

In May, unique DNA signatures for plague discovered by Andersen and fellow researchers were used in Northern Arizona to confirm the presence of a naturally occurring outbreak of plague within four hours. The work was done in collaboration with Northern Arizona University. Normally, plague detection tests have required about seven to 10 days.

FUGU

Continued from page 1

Centre, the Cambridge University Department of Oncology, the Institute for Systems Biology, and private industry companies, Celera Genomics and Myriad Genetics, Inc.

The Fugu genome contains essentially the same genes and regulatory sequences as the human genome, though it carries those genes and regulatory sequences in approximately 365 million bases, compared to the 3 billion bases that make up human DNA. During the past year, nearly 4 million pieces of Fugu genome sequence were identified by the consortium.

The genomic fragments overlap each other, allowing them to be reassembled computationally to reconstruct long stretches of the Fugu genome. The Fugu genome is the first vertebrate genome to be draft sequenced after human.

There are more than 100 species of pufferfish that live in saltwater and fresh-water habitats. Fugu species are farmed in Japan and the flesh is consumed as a delicacy, though certain organs of the fish must be avoided because they contain a potent neurotoxin causing those who eat the organs to die, sometimes in minutes. About 60 percent of puffer poisonings

prove fatal.

The mapping of Fugu is significant because its compact form and similarity to the human genome make it an important tool for getting at the information encoded in the human sequence, according to Trevor Hawkins, JGI director. With the basic gene-level description of two vertebrates, researchers can more easily compare and contrast them to discover new human genes and elements, which control or regulate the activity of genes.

"Although the Fugu genome is only one-eighth the size of our human genome, it has a similar compliment of genes," Hawkins said. "However, we don't know all that much about the structure of those genes and how they are turned on and off. By sequencing the genomes of microbes, sea squirts and Fugu, we can find links to understanding the biology of the human genome."

Fugu and humans are related by evolution. About 450 to 500 million years ago the first vertebrates appeared in the early oceans. Their descendents split into two main groups: the ray-finned fish — which include Fugu and most common fish — and the lobe-finned fish, a more obscure group. During millions of years, the lobe-fins evolved into the limbs possessed by all four-limbed creatures, including

reptiles, amphibians, birds and mammals.

"So the Fugu is a very distant cousin," Hawkins said. "And consequently, this common ancestry is still recorded in our genes. That's why this sequencing is so incredibly important to us."

Fugu is the first animal genome to be sequenced and assembled in the public sector using the "whole genome shotgun" sequencing approach.

"We first chopped the genome up into pieces that are small enough to sequence," said Dan Rokhsar, associate director for computational genomics at JGI. "The challenge was then to reassemble the genome by putting together nearly four million of these overlapping fragments in the same way that you'd put together a giant jigsaw puzzle."

The JGI is one of the largest publicly funded genome sequencing centers in the world and is operated jointly by the three UC-managed DOE national laboratories, Lawrence Livermore, Lawrence Berkeley and Los Alamos.

The consortium plans to publish an initial analysis of the draft Fugu genome in early 2002.

For more information and up-to-date Fugu sequence information, go to <http://www.jgi.doe.gov/programs/fugu.htm>.



THE BACK PAGE

Atkinson, McTague commend Lab's post Sept. 11 efforts

Earlier this week, Director Bruce Tarter and Los Alamos Director John Browne received the following from UC President Richard Atkinson and Vice President-Laboratory Management John McTague:

Dear John and Bruce:

You and your staffs are to be commended for extraordinary performance at this unprecedented time in our nation's history.

*Sincerely,
Richard C. Atkinson*

Enclosed in the Atkinson memo was the following message from McTague and Atkinson:

Members of the Laboratory community:

As our nation recovers from the shock and destruction of the terrorist attacks on Sept. 11, we want to tell you how proud the University of

California is of the way you have responded to the crisis.

In addition to being concerned about site security as well as your personal safety, you have responded tirelessly to help public health officials, law enforcement authorities, and others throughout the nation understand and deal with the new threat of terrorism. Fortunately for the nation, many of you have been helping to determine how to respond to such a threat long before the need became so tragically clear to everyone, and for that we are deeply grateful.

The Los Alamos and Lawrence Livermore Labs were created in times of crisis — LANL during World War II and LLNL during the Cold War. Through all of the changes and challenges the laboratories and the nation have faced in the intervening years, the defining characteristic of the labs' leadership and staff has been their keen sense of national mission — working toward important goals and performing with extraordinary skill and dedication. This attitude was the lega-

cy of Ernest Lawrence, whose programs became the model for America's national laboratories, and of Robert Oppenheimer, the first director at Los Alamos. Today it is your legacy.

Our world is very different now than it was half a century ago; the past few weeks alone have brought extraordinary changes. We have little doubt that there will be more challenges in the war against terrorism, and we are certain that you will continue to create the science and technology essential to meet those challenges. The University of California is proud to manage the national laboratories, and we are indebted to you for all that you do for the University and for our nation.

*Sincerely,
Richard C. Atkinson*

John P. McTague

MEDIA

Continued from page 1

research.

In the immediate aftermath of the Sept. 11 attacks, reporters were interested in nuclear security and the activities of LLNL's Nuclear Emergency Search Team or NEST. Alan Mode, recently retired division leader for counterterrorism and incident response, was interviewed for CBS Evening News, *Business Week*, the *San Francisco Chronicle* and other local publications.

The Lab's Public Affairs Office is still fielding dozens of calls daily from news media wanting to know what the Laboratory is doing to help in the new war on terrorism.

"We have good stories to tell," said Susan Houghton, deputy director of Public Affairs. "Our work in the field of biodetectors, for example, is very impressive, and reporters are very interested in that."

Thus far, almost 70 news stories mentioning Lab anti-terrorism work have been published or aired, with more slated to appear soon. Calls have come from news outlets ranging from national institutions such as ABC World News Tonight, CNN and *The New York Times* to regional and local news organizations from across the country.

"There have been so many requests for interviews that we've had to be somewhat selective in granting them," said Houghton.

While much of the Lab's work toward combating terrorism is classified or in early development stages, there are a number of research efforts that can be shared with reporters and the public.

One such project is HANAA, the Handheld Advanced Nucleic Acid Analyzer. Developed by the Nonproliferation, Arms Control and International Security (NAI) directorate and the Biology and Biotechnology Research Program, HANAA is a small (about the size of a brick), portable, battery-powered device that can be used in the field to detect the presence of pathogens such as anthrax or plague through the analysis of sample DNA. The process takes 30 minutes or less.

The Lab has been working with a commercial partner to produce prototype models of the machine. A license is expected to be granted shortly, after which full production of final models is anticipated.

The HANAA team is led by NAI's Ronald Koopman.

Another device, the Autonomous Pathogen Detection System (APDS), also searches for the presence of pathogens in the environment. The APDS is designed to be installed inside buildings, subway systems or other public venues, where it can continuously monitor the air for the presence of pathogens. Should the device detect such a presence, it can alert emergency response agencies.

The APDS is under development by BBRP's Richard Langlois and his team, which hopes to identify a commercial partner in the next year.

A number of people have worked on the HANAA and APDS systems. They include Steve Brown, Bill Colston, Les Jones, Don Masquelier, Mary McBride, Shanavaz Nasarabadi, Kodumudi Venkateswaran, Fred Milanovich, Keith Burris, Paula McCready, William Benett, Jim Richards, Paul Stratton and Dean Hadley.

Also in the Biology and Biotechnology Research Program, Gary Andersen and colleagues Wendy Wilson, Todd Desantis, Peter Agron and Lyndsay Radnedge are working in two areas related to detection of biological agents. They are identifying the DNA signatures of a host of pathogens so the information can be used in devices such as HANAA, APDS or other detection systems. They are also working with Affymetrix to develop gene chips — similar to computer chips — that can store genetic information on unique diagnostic regions for various pathogen strains, allowing for high-throughput, high-confidence analysis of unknown agents.

Using similar techniques, researchers hope to be able to distinguish one strain of a pathogen from another. This level of detection specificity would aid in the study of naturally occurring outbreaks and help distinguish rare but natural occurrences from potentially suspicious outbreaks. Andersen's team is also collaborating with the Centers for Disease Control to identify food pathogens and to track the source of an infection based on pathogen strain identification.

The Lab is in partnership with Los Alamos National Laboratory on the Biological Aerosol Sentry and Information System (BASIS), a field laboratory linked to a network of monitors that work together to "sniff" the air over a given geographical area for the presence of biological agents. Unlike the APDS, the BASIS samples are brought to a central BASIS lab, where samples are analyzed for the presence of pathogens.

BASIS was demonstrated in Salt Lake City last March. It is currently configured for limited duration operations such as special events, and in the future will be modified for long-term operations.

Once pathogens such as anthrax or plague are discovered, what do you do with them? You might clean them up with L-Gel, a Lab-developed, silica-based oxidizer material that can be sprayed onto any surface to kill biological agents or to neutralize chemical warfare agents. Developed by researchers from the Environmental Protection Department and the Chemistry and Materials Science directorate, L-Gel works in less than an hour and, because it is environmentally benign, can be vacuumed away or simply left in place for outdoor decontamination.

The Lab has identified potential industrial partners to commercialize the gel and is working quickly to develop a licensing agreement to meet

increasing demand for the material.

The L-Gel team, led by EPD's Department Head Ellen Raber, includes C&MS's Mark Hoffman and EPD's Paula Krauter and Tina Carlsen.

With airport security even more of a concern following the terrorist attacks, technology to improve screening of passengers and their baggage or cargo has gained renewed interest. Harry Martz, director of Engineering's Center for Nondestructive Characterization, sits on a National Academy of Sciences committee that reviews Federal Aviation Administration airport safety regulations. Martz, with expertise in new X-ray and industrial CT scanning technologies, and research projects under way in ultrasonic and thermal technologies, has been called upon by the news media to discuss existing and potential scanning technologies.

Martz will take part in an FAA conference later this month that will review available and emerging scanning technologies in the wake of Sept. 11.

The attacks on the World Trade Center and Pentagon as well as the recent anthrax incidents have put NAI's nonproliferation and counterterrorism activities in the media spotlight.

"We have been working on counterterrorism as part of our nonproliferation mission for many years," said Wayne Shotts, NAI associate director. "The events of September 11 have lent new urgency to our efforts to develop the Lab's unique capabilities for countering terrorism. The Lab brings a great deal of expertise and experience to the nation's effort to defend the country against biological, chemical or nuclear terrorism threats."



Newsline
UC-LLNL
PO Box 808, L-797
Livermore, CA 94551-0808