LDRD stars illuminate their work

Presentations show wide range of research activities

By Neal Singer

On a stage-emblazoned with the words "Laboratory Directed Research and Development," six youthful-appearing researchers presented their projects. The auditorium was filled with the noise of excitement as the audience eagerly listened to the presentations. The atmosphere was electric, and the energy was palpable. The presenters were all smiles as they shared their research with the audience.

The noise level rose afterward when a panel of judges deliberated on the presentations. The judges were independent and selected by the annual R&D 100 award winners since 1992. The judges were Rick Stulen, who explained the evolving basis for winning the coveted three-year funding, which the Labs has used to develop promising new technologies. Stulen said Rick's figures, early-stage LDRD grants have supported 60 percent of Sandia's R&D 100 award winners since 1992. (R&D 100 award winners are determined yearly by independent judges selected by R&D Magazine from projects submitted to the competition from around the world. The projects are reviewed to determine their potential impact.)

The program's history and results are indeed unusual. According to Rick's figures, early-stage LDRD grants have supported 60 percent of Sandia's R&D 100 award winners since 1992. (R&D 100 award winners are determined yearly by independent judges selected by R&D Magazine from projects submitted to the competition from around the world. The projects are reviewed to determine their potential impact.)

Convergence of issues is driving move toward transformation of nuclear weapons complex

Sandia management teams tackling challenges on a Labs-wide basis

By Bill Murphy, Lab News editor

Several developments, each of which by itself could have a significant impact over the next several years on the Labs, its mix of work, and its workforce, are converging virtually at the same time. The Labs' Director Tom Hunter has assigned senior management-led teams to study the implications and impact of each of the issues and develop strategies and responses for dealing with them. The issues will not be dealt with as separate challenges, but will be considered in a synergistic, Labs-wide fashion, Tom has said. Several developments, each of which by itself could have a significant impact over the next several years on the Labs, its mix of work, and its workforce, are converging virtually at the same time. The Labs' Director Tom Hunter has assigned senior management-led teams to study the implications and impact of each of the issues and develop strategies and responses for dealing with them. The issues will not be dealt with as separate challenges, but will be considered in a synergistic, Labs-wide fashion, Tom has said.

Neutron scatter camera provides a new way to look at radiation

By Patti Koning

Since 9/11, radiation detection has taken on a new immediacy as a means of preventing a nuclear weapon attack within the US. Gamma-ray and neutron detectors are being deployed at border crossings and ports, with the goal of enabling interdiction of a nuclear weapon or material before it enters the country.

A neutron scatter camera being developed at Sandia/California offers a new way to detect radiation. The instrument is able to count neutrons from a source of special nuclear material (SNM) and localize them — meaning it doesn’t just tell you there is radiation, but where it is emanating from and, under some circumstances, how much there is.

LDRD Awards for Excellence winners recognized. See page 5.

DURING HIS LDRD DAY PRESENTATION, researcher Mark Boslough discussed the effects of an asteroid collision with Earth. As depicted in this computer model image developed by him, large ring vortices enhance downward energy flows, intensifying their coupling with Earth's surface.

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... (Continued on page 5)
Strategic Relations Center restructured

By Chris Burroughs

Effective Sept. 21, Strategic Relations Center 10100 was restructured to be more responsive to a changing Labs mission portfolio and evolving industry needs.

- Work for Others/Cooperative Research and Development Agreements will report to Senior Manager Gary Zur (9730). He reports to Tom Blewag (9100), director of the Integrated Enabling Services (IES) Support and Lab Management System Center.
- The partnerships development groups that have been supporting the Energy, Resources and Nonproliferation (ERN) and Defense Systems and Assessments (DSA) SMUs will report directly to Al Romig, Senior VP and Deputy Labs Director.
- “With Labs missions changing, we felt it was time to restructure the organization to better meet the needs of the SMUs and industry to the benefit of both,” Al says.

DOE funding for tech transfer programs peaked at $100 million in the early 1990s but the program was later discontinued. The focus has now shifted to agreements with industry that focus on building mission-oriented relationships.

Stronglinks Conference set for Oct. 15-16

Integrated Surety Mechanisms Dept. 2613 is sponsoring a Stronglinks Conference Oct. 15-16 in Bldg. 898, Rm. 1423. The two-day conference is intended to give a broad overview to employees in DOE’s nuclear weapons complex of the production of stockpile stronglinks and advanced development projects for stronglinks.

The Oct. 15 session is scheduled to run from 10 a.m. to 5:30 p.m. The Oct. 16 session runs from 7:45 a.m. to 5:30 p.m.

For technical information call Bill Greenwood at 844-2847. For more information about the conference, call Wendy Fal at 284-1534. To RSVP, call Wendy at 284-1534 or contact her via email at wfall@sandia.gov.

Recent Patents

Note: Patents listed here include the names of active Sandians only; former Sandians and non-Sandia inventors are not included. Following the listing for each patent is a patent number, which is searchable at the US Patent and Trademark Office website (www.uspto.gov).

- Blake Sennons (8755), Jeanne Volponi (8321), and David Ingerson (2546): Enzymatic Cascade Bioreactor (Patent No. 7,264,962).


Sympathy

To Chris Tolentino (4112) on the loss of her mother, Sandia retiree Virginia Chapman, on Sept. 21, and Larry Tolentino (9334) on the loss of his mother. Virginia is also survived by two other children, son Tom Chapman and daughter Kari Wier.
Rad detection

(Continued from page 1)

The results so far are encouraging, says principal investigator Maarten van der Zande (8322). The neutron scatter camera potentially could detect SNM in quantities of interest in national and homeland security and from distances competitive with or beyond other capabilities. Nick says the goal is to reach much greater standoff detection ability. Distance is a significant benchmark because it also means the neutron scatter camera can detect through heavy shielding, a concern at any border crossing or point of entry.

"This instrument can pinpoint a hot spot in another room through walls, something not typically possible with gamma-ray detectors," he says. "It's beating the older technologies, performance-wise, but we want to push the limits of what this instrument can do — to increase sensitivity and detection distance."

Jim Lund, manager of Rad/Nuc Detection Systems Dept. 8132, thinks the neutron scatter camera might be the best answer to the problem of seeking out smuggled SNM.

"It's more penetrative and can detect unabashedly at a greater distance and through more shielding," he says.

The project is supported by NNSA's Office of Nonproliferation R&D (NA-22). After successful initial development, the technology is being transitioned to the Defense Threat Reduction Agency (DTRA) and Domestic Nuclear Detection Office (DNDO) to support specific applications.

DNDO impressed by device

Recently, representatives from DNDO sat in on an off-site presentation by Nick to NNSA. They were so impressed that they asked him how quickly he could have it ready to ship to Hawaii as part of George's project (8412) in transit neutron characterization project (Lab News, Aug. 17, 2007). The neutron scatter camera will make three round-trips to Hawaii — the first departed from the Port of Oakland in early September. George says the camera has the potential to reduce false alarm rates — a critical issue for in-transit neutron detection.

"Our other instruments have told us a lot about the nature of nuclear radiation at sea, but not where it is coming from," the neutron scatter camera can tell us where the radiation is coming from and the size of the object. This information is very helpful in deciding if we have a serious threat on our hands and can lead to fewer false alarms and a better chance of not missing the real thing," he says. "DTRA is funding a separate project to use the neutron scatter camera to measure and characterize backgrounds at neutron scattering stations at Sandia, including New Mexico, and in Alameda, Cali.

"There are neutrons all over the place from detailed specs to posters to hand-drawn figures. To see technical illustrator, capable of any job you throw at him — from drawings to detailed technical illustrations to full-color posters to hand-drawn figures. To see him at work, pay a visit to the Technical Illustration lab, at the corner of 8th and L.

The camera consists of elements containing proton-rich liquid scintillators in two planes. As neutrons travel through the scintillator, they bounce off protons like billiard balls. This is where "scatter" comes into play with interactions in each plane of detector elements, the instrument can determine the direction of the radiation. Once through the scintillator, the neutron scatters into the detector.

The neutron eventually flies off, but not before energizing the protons with which it has interacted. The proton will lose its energy in the scintillator. As that energy is lost, it is converted into light. Photomultiplier tubes coupled to the scintillator detect the light.

Computers record data from the neutron scatter camera and, using kinematics, determine the energy of the incoming neutron and its direction. Pulse shape discrimination is employed to distinguish between neutrons and gamma rays.

The biggest obstacle to the camera becoming widely adopted is the liquid scintillator, which is flammable, hazardous, and requires special handling. According to Nick, materials exist that could be used as a solid scintillator, but they need to be mass-produced and made readily available in the US for this purpose. Solid scintillator material, he says, is not in the scope of the current project but is a logical next step.

The current version of the neutron scatter camera has four elements on one side and seven on the other. To improve sensitivity and direction, all that is required is to add more elements.

Nick describes scaling up as an engineering challenge rather than a scientific limit. Bigger means more places where things can break down, but this isn't a physics issue, he says.

"We are not concerned with size at this point — our mission is to understand everything about the performance of this instrument and make it the best it can be," he says. "Making it portable or compact might be the next steps, but that's something I'm confident that Sandia, as an engineering laboratory, can solve."

Ken Ball's 'street photography' featured in Livermore Art Walk

By Patti Koning

Most people at the Sandia/California site know Ken Ball (8528) as a superb technical illustrator, capable of any job you throw at him — from detailed specs to posters to hand-drawn figures. To see him at work, pay a visit to the Technical Illustration lab, at the corner of 8th and L.

Sponsored by the Tri-Valley Artists Guild, Art Walk features the work of more than 100 artists exhibited in and around local businesses in downtown Livermore. Ken's work will be displayed in the offices of The Independent, at the corner of 8th and S. and N. Livermore Ave.

He'll be exhibiting what he calls street photography. "I like to capture the human element, which often means photographs without people in them, but showing the impact of people," he explains.

His street photography is always spontaneous, never staged. Ken brings his camera to San Francisco or anywhere he happens to be and looks for something that catches his eye.

"Perhaps because I am a graphic designer by trade, I am attracted to images that have a strong sense of design. The combination of shapes, light, color, and cropping in my photographs tends to be graphic in nature," he says. "Most of my street photography involves observing and capturing the environment. Whether I am shooting portraits, street scenes, or objects, it is the human presence that I find interesting. That presence may be obvious or unintentional, such as a line of people crossing or point of entry.

"JDOG" an example of Ken Ball's black-and-white "street photography" was taken in San Francisco. (Photo by Ken Ball)

Both Adams and White were involved in founding the photography department at the California School of Fine Arts (now the San Francisco Art Institute) and taught at the school, along with other notable photographers such as Dorothea Lange, Edward Weston, Imogen Cunningham, and others.

Victoria's father, Don Whyte, attended the California School of Fine Arts and later worked for various photography studios, including others. The book features the work of more than showcasing their large format black-and-white photos taken between 1945 and 1955. Ken and Victoria expect the book to come out in 2008.
Happy birthday, US Air Force!

* * *

3. An NNSA RFI (Request for Information) on revisions to the current contracting structure for the nuclear weapons complexes.

NNSA on Sept. 10 issued a formal Request for Information (RFI) about ways to (in the words of an NNSA news release issued along with the RFI) “improve its current contracting structure for the nuclear weapons complex, particularly at its production plants.” Each of NNSA’s eight sites (including its three national laboratories, the Nevada Test Site, the Pantex Plant, the Kansas City Plant, Y-12, and the Savannah River Site) operations) is handled under a separate management and operation contract.

The news release accompanying the RFI stated: “NNSA is evaluating alternatives to this current contracting model and is seeking to identify a contract arrangement — especially at its Kansas City Plant, Y-12, and the Savannah River Site” operations) is handled under a separate management and operation contract. NNSA specifically invited input on the RFI from the contracting community and other interested parties. Responses to the RFI are due Oct. 1. As an interested party, a Sandia Corporation/Lockheed Martin team went to work immediately to develop a response to the RFI.

According to the terms of the RFI, responses could include, but are not limited to, consolidation of management and operating contracts, use of other types of contracts on a single or multiple facility basis, use of function-based contracts (e.g., construction, information technology) applicable to two or more sites, and transfer of work scope from one or more current contracts to other existing or new contracts.

According to the Sandia Corp. RFI team lead Dori Ellis (12100), as the group weighs its response to NNSA, it is taking a broad view and considering options that best serve the nation.

The ultimate decision on how to use the information garnered through the RFI process is in NNSA’s hands, but the issuance of the RFI suggests that NNSA is beginning to move forward with its much discussed transformation process. And implicit in the RFI is the sense that NNSA is looking for innovative ideas. Thus, as the complex is transformed, changes — even bold changes — are likely at Sandia and other NNSA facilities.

It’s important to recognize, too, that Sandia has not been caught flat-footed by the NNSA RFI. Joan Woodard and the leadership team in the Nuclear Weapons SMU have been working for more than two years on issues around transformation of the nuclear weapons complex, how it should look in the future, and where Sandia and its assets fit into that picture. Much of the hard thinking that has been done on that subject is likely to find its way — in one form or another — into the Sandia Corp./Lockheed Martin RFI response.

* * *

The context of change

The issues outlined above are the most visible, above-the-horizon developments that Sandia management — along with its counterparts across the nuclear weapons complex — are dealing with at the present time. Below the horizon, however, is the fact that these developments are occurring in a dynamic public policy environment and an increasingly complex and multipolar international order.

During the Cold War, the nation enjoyed broad, bipartisan consensus: America would invest whatever it took to counter strategic investment in the Soviet Union. Since the early 1990s, the nation has been moving toward a new understanding of strategic deterrence and the role of nuclear weapons should play. There is not yet an absolute bipartisan consensus, but there is growing agreement that a nuclear deterrent is essential for the nation, that the stockpile must be smaller, and the Cold War-era weapons complex needs to be fundamentally transformed. There seems to be a growing consensus that the national laboratories need to diversify their missions even more than they have over the past decade, and even a sense that some facilities that are currently “owned” by DOE/NNSA should perhaps become multiagency facilities with only peripheral roles in nuclear weapons work.

For the past two years, Sandia’s senior management has been talking about the need to transform, the desirability of transformation, even the inevitability of it. With the developments outlined above, and given the context in which those developments are occurring, it is clear that transformation — change — is upon us.
must show enough development, in addition to original research, to make a difference in the world's understanding of a subject.

In addition, LDRD funds have supported a fair number of Sandia's 10 most highly cited publications from 2002-2006. Although these numbers are not a perfect indicator, it does suggest that the LDRD program is having an impact.

**2007 LDRD Award for Excellence winners**

- **Nanolithography Directed Materials Growth and Self-Assembly**
  
  **Principal investigator:** Julia Hau

  For pioneering work on controlled growth and assembly of oxide nanostructures on surfaces and for furthering the understanding of heteroepitaxial growth of dissimilar materials.

- **Microwave to Millimeter Wave Electrodynamic Response and RF Applications of Semiconductor Quantum Nanostructures**
  
  **Principal investigator:** Mark Lee

  For opening a new frontier in high-frequency nanotechnology by exploiting the quantum mechanical properties of semiconductor nanostuctures for microwave and millimeter-wave applications.

- **Controlled Fabrication of Nanowire Sensors**
  
  **Principal investigator:** Francois Leonard

  For developing a fundamental understanding of nanowire-based sensors: synthesis, assembly, characterization, and modeling.

  - **Just In Time Jamming of Enemy Detonation Signals**
  
    **Principal investigator:** Larry Bacon

    For developing a response RF jammer that selectively jams in narrow frequency range.

- **Nanoporous Films for Epitaxial Growth of Single Crystal Semiconductor Materials**
  
  **Principal investigator:** Hongyou Fan

  For developing photolithographically defined and self-assembled carbon nanostructures to provide first-of-a-kind hierarchical growth templates for defect reduction in wide bandgap semiconductor heteroepitaxy.

- **Bead-based Multiplexed, Orthogonal, BW/ID BioVaccine/Infectious Disease Detection Microsystem and Technologies**
  
  **Principal investigator:** Paul Gabbons

  For leading multidisciplinary approaches for high-risk, innovative approach to the simultaneous detection of chemical/biological agents and radionuclides in raw samples.

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**LDRD Day**

(Continued from page 1)

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By accident or design, the speakers seemed to agree that the LDRD program has had a significant impact on Sandia's research efforts. Twenty percent have been in the less-than-$100,000 range. "Don't hesitate to apply," the speakers said. "If you have an idea that you think is important, we'll support it."
Benefits Choices 2008

Open Enrollment is Oct. 20-Nov. 9

It's time to make your benefit decisions for the coming calendar year. Benefits Choices 2008 Open Enrollment will begin Oct. 20 and continue through Nov. 9. All benefit elections will not be accepted after midnight (MST) Nov. 9. All benefit elections take effect Jan. 1, 2008.

This year provides you with important Open Enrollment (OE) information for employees and retirees and the 2008 benefit plan changes. A summary of premium and deductible amounts is available at http://oe.sandia.gov. By reading this article along with other Open Enrollment communication materials and employee newsletter, Open Enrollment web site, information and tools, and benefit election materials you will be able to evaluate and select the best plan for you and your family.

For Benefits Choices 2008 web-based Open Enrollment information and resources, visit HR Self-Service at http://oe.sandia.gov.

What's new for employees in 2008

Health, Benefits, and Employee Services (HBE) wants to point out two items that are important for you to take note of during this Open Enrollment. First, effective Jan. 1, 2008, for employees enrolled in one of the UnitedHealthcare (UHC) medical plans, the administrator for your prescription drug benefit is changing from PharmacyCare to Cat-alyst Rx. For detailed information, check out the article "Important Rx Drug Benefit Information for UnitedHealthcare Members" on the OE website http://oe.sandia.gov. Also beginning Jan. 1, 2008, for employees enrolled in the Sandia Medical Plan, the Medical Plan Estimator is specifically designed to help you estimate that cost, looking at both: providers and nonproviders. If you are thinking about changing medical plans, you can use the Medical Plan Estimator online http://oe.sandia.gov. If you are interested in using a spending account for your child's medical care, the Medical Plan Estimator will show you the amount that comes out of your pay check when you enroll in the Sandia Medical Plan. You can find the Medical Plan Estimator online at http://oe.sandia.gov.

Second, a change to the vacation borrowing rule for nonrepresented employees, effective Jan. 1, 2008, will limit the number of "borrowed" hours to 40. ("Borrowing Vac- ation") is vacation hours taken in excess of accruals plus remaining paid vacation, putting employees in a negative balance situation. Years of service are taken into account when determining if the employee is in a borrowing situation. Employees on roll for 10-plus years are in a borrowing situation when their vacation balance and fiscal year projection is negative. Employees on roll less than 10 years are in a borrowing situation when their vacation balance and any earned but not yet posted vacation is negative. In either case, when the balance is negative, the employee is in a borrowing situation and limited to 40 hours.

Most employees in a negative vacation balance are negatively impacted less than 40 hours. For those who found themselves needing more time off, Sandia offers other options such as annual unpaid leave, Volunteer Vacation Donation (for qualifying emergencies), and Vacation Buy Plan — an Open Enrollment option.

HR Self-Service — web enrollment continues for Open Enrollment 2008

Employees can locate the web-enrollment tool through HR Self-Servicer or through the OE Web Teaser on the Sandia home page. Do you need to use the Web-Based Open Enrollment Application? Use this chart to decide . . .

More benefits information

Retiree information begins on page 7

Steps to take during Open Enrollment . . .

1) Review your current benefits under "Benefits Summary" on the HR Self-Service internal home page
2) Review the Open Enrollment newsletter and view the Open Enrollment information on the http://oe.sandia.gov at work or at home, and evaluate how you want to coordinate benefits with your spouse's benefits (received through his/her employer).
3) Attend a benefit fair to speak with the vendors and/or Sandia staff. (See page 10 for benefit fair schedules.)
4) Determine whether you need to use the web-based Open Enrollment application according to the table at right.

Helpful tips: Remember to print the "Enrollment Summary Page" as a record of your final selections.

Plan ahead — some questions to ask:

• Do I need to add or drop any dependents? Detailed information about eligibility is available on the OE website. Remember, changes made during current Open Enrollment are effective Jan. 1, 2008.

• (If married to another Sandian) — Am I satisfied with the current coverage arrangement? Remember that both Sandians must make these changes through the web-based Open Enrollment System.

Note: If an active employee is covered as a dependent of a Sandian retiree, the employee will be enrolled in the applicable retiree plan.

• Do I want to open up a Day Care Reimbursement Spending Account (RSA) for my child's day care next year? Review the Payfile, Tax Wizard (www.mypayfile.com) or RSA Summary Plan Description worksheet to determine whether the tax credit is best for you. Remember that these accounts require an election each year.

• Do I expect to have health plan expenses (medical, dental, and vision) that will exceed $100 during the next calendar year? Does my child need orthodontic treatment next year? Am I getting LASIK surgery? If so, should I open up a Health Care Reimbursement Spending Account? Remember that these accounts require an election each year.

• Am I satisfied with my medical plan? Is my physician still in the network? If not, changing medical plans, you should visit the vendor’s website to review the list of network providers.

For many people, cost is one of the key factors in choosing a medical plan. The Medical Plan Estimator is specifically designed to help you identify that cost, looking at both:

• What are you likely to pay for the services and supplies you need during the year; and

• The amount that comes out of your paycheck when you enroll in the Sandia Medical Plan.

Important: It is your responsibility to thoroughly review your benefit enrollments for 2008 through the web page "PeopleSoft Open Enrollment" from Oct. 20-Nov. 9. Thiveld will be your only opportunity to make changes. HBE recommends that you print the "Enrollment Summary Page" as a record of your final selections.

Make your choices early, so that you don't forget to enroll if you need to!

More information

More information on the Enrollment website:

http://oe.sandia.gov (for employees and retirees)
http://hbe.sandia.gov (for employees and retirees)

2008 employee medical plan options; same choices as 2007

This section outlines the medical plan choices for 2008 for employees, which are the same choices that were offered for 2007. To view detailed plan information, see the Medical Plan Comparison Chart and/or applicable Summary Plan Description at the OE website (http://oe.sandia.gov) outlining specific plan designs/features of the various options.

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Employee medical premium sharing — Effective Jan. 1, 2008

Good news from the Benefits Department for nonrepresented UHC and CIGNA PPO members. The premium-share amounts for the UnitedHealthcare (UHC) Standard PPO Plan, the UHC Premier PPO Plan, and the CIGNA Premier PPO Plan are essentially staying flat for 2008.

For nonrepresented employees, the CIGNA In-Network premium-share amounts are increasing by an average of 5 percent. The CIGNA In-Network Plan required a rate adjustment, as it has been determined that the relative rates (or "value") of the benefits of this Plan is actually slightly higher than the Premier plans (i.e., the other self-funded plans). Note: Individual plan rates for the self-insured plans are set to reflect the "value" of the plans (e.g., plan design, in/out-of-network benefits).

Represented employees medical premium shares are established according to the provisions in the applicable bargaining agreements. Kaiser members will see significant increases in their premium-share amounts. While the self-insured plans' costs have moderated through better vendor discounts and plan design changes, the increased rates for the Kaiser plan have increased by almost 25 percent over the last two years. The plan design offered by Kaiser is an "off-the-shelf" product and is developed by Kaiser. Therefore, due to the increased premiums charged to Sandia for the Kaiser HMO, the premium-share rates have been adjusted to better reflect the cost increases in their premium-share amounts. While the self-insured plans (i.e., the other self-funded plans) have increased by almost 25 percent over the last two years. The plan design offered by Kaiser is an "off-the-shelf" product and is developed by Kaiser. 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For more information about monthly premium shares, contact the HBE Customer Service Center at 505-844-HBES (4237).

Important: Employees are required to determine if their dependent qualifies as a qualified dependent under Internal Revenue Code Section 152 guidelines for the purpose of health care coverage. If your dependent is not a qualified dependent under the tax code, you are required to contact the Benefits Department to determine whether any imputed income may apply for that nonqualified dependent.

Retiree Open Enrollment information for 2008

What's new for retirees for 2008?

HBE wants to point out two very important changes for you to take note of during this Open Enrollment.

First, effective Jan. 1, 2008, for retirees enrolled in one of the UnitedHealthcare (UHC) Premier and Senior PPO medical plans, the administrator for your prescription drug benefit is changing from PharmaCare to Catalyst Rx. For detailed information see "Important Rx Drug benefit information for retirees" on page 10. This change does not apply to retirees enrolled in the UnitedHealthcare (UHC) High Deductible Health Plan. Second, new combo families (mixed Medicare primary and non-Medicare primary) enrollment will be restricted. This means new enrollment to the Presbyterian Medicare PPO and Lovelace Senior Plan is only offered to individuals and families where all family members are Medicare Primary. Families already enrolled in the combination plans (UHC Premier PPO Plan, UHC Premier Senior PPO Plan, or CIGNA Premier PPO/CIGNA In-Network Plan with Lovelace Senior Plan) will be grandfathered. Retirees will continue to receive an Open Enrollment booklet as well as a Medical Plan Comparison chart. If you need to make any changes for 2008, you will need to complete the Open Enrollment Change Form included in your Open Enrollment booklet and mail it to the Sandia Benefits Department (postmarked by mid-night Nov. 9). Look for your Benefits Choices Open Enrollment packet to arrive at your home address (for retirees and survivors) the week of Oct. 15. If you do not receive a booklet, contact the HBE Customer Service Center at 505-844-HBES (4237).

Steps for retirees to take during Open Enrollment

1) Review the Open Enrollment booklet carefully to learn of any changes in your benefits and premium-share amounts and/or to identify any changes in benefits you want to make.

2) Attend an Open Enrollment presentation (schedule on page 15) to learn more about the plans and to talk to a medical plan representative (where available).

3) Complete the Open Enrollment Benefit Change Form located in your Open Enrollment booklet according to the table below.

Plan ahead — some questions to ask

• Do I need to add or drop any dependents? Detailed information about eligibility is included in the Retiree Open Enrollment booklet. Remember changes made during Open Enrollment are effective Jan. 1, 2008.

• Am I satisfied with my medical plan? If my physician still is in the network? If you are thinking about changing medical plans, you should review the vendor's website to review the list of network providers.

For many people, cost is one of the key factors in choosing a medical plan. The Medical Plan Estimator is specifically designed to help you estimate that cost and is available to Non-Medicare Retirees. The tool can assist you in looking at both:

- What you are likely to pay for the services and supplies you need during the year.
- The amount that comes out of your paycheck when you enroll in the Sandia Medical Plan.

You can find the Medical Plan Estimator online at www.sandia.gov/resources/emp-ret/emp-ret-oe.

Note: If you make a change during Open Enrollment, you will receive a confirmation mailed to your home; otherwise you will not receive a confirmation after Open Enrollment ends. For medical plan information/changes, refer to the section titled Retiree Medical Plan Options. Also, refer to Retiree Medical Premium-Sharing for information on 2008 monthly premiums.

Make your choices early, so that you don't forget to enroll if you need to!
Retiree medical plan premium sharing — effective Jan. 1, 2008

Retiree premiums vary based on when you retired, your years of service at the time of retirement, as well as the plan and the level of coverage you choose.

**Important:** Retirees are required to determine if their dependent qualifies as a qualified dependent under Internal Revenue Code Section 152 guidelines for purposes of health care coverage (seek advice from your tax adviser). If your dependent is not a qualified dependent under the tax code, you are required to contact the Benefits Department to determine whether any imputed income may apply for that nonqualified dependent.

**Employees who retired prior to Jan. 1, 1995**

Employees who retired prior to Jan. 1, 1995, will not be required to pay a premium share for themselves or any eligible Class I dependents at this time. (Exception: Retirees who retired prior to Jan. 1, 1995, but who currently pay a portion of their medical coverage will continue to do so.)

**Employees who retired after Dec. 31, 1994, and before Jan. 1, 2003**

Employees who retired after Dec. 31, 1994, pay a monthly premium for coverage in Sandia’s medical plans. The monthly premium-share amount will be deducted from your pension check. Use Table A to find your rate for your selected plans.

Also...

- Employees who retired after Dec. 31, 2002, and retired with 30+ years of service should use Table B.
- Employees who retired after Dec. 31, 1994 and before Jan. 1, 2003 with 20-24 years of service should use Table C.
- Employees who retired after Dec. 31, 1994 and before Jan. 1, 2003 with 15-19 years of service should use Table D.
- Employees who retired after Dec. 31, 1994 and before Jan. 1, 2003 with 10-14 years of service should use Table E.

**Employees who retired after Jan. 1, 2003**

Retirees should use the tables here (Tables B-E are on the next page) to calculate their monthly premium sharing cost for medical insurance in Sandia’s medical plans. The monthly premium-share amount will be deducted from your pension check. Use Table A to find your rate for your selected plans.

**Summary Plan Description at the OE website outlining specific plan designs/features of the various options.**

**Need answers? See the benefits fair schedule on page 10**
Retirees should use the tables here (Table A is on the preceding page) to calculate their monthly premium sharing cost for medical insurance in calendar year 2008. The applicable monthly premium share amount will be deducted from your pension check.

### Table B

**Who should use this table?**

Employees who retired after Dec. 31, 2002, and retired with 25-29 years of service.

<table>
<thead>
<tr>
<th>Number of Medicare</th>
<th>UHC Senior PPO Premerise PPO</th>
<th>CIGNA Senior PPO</th>
<th>Presbyterian Medicare PPPO</th>
<th>Lovelace Senior Plan</th>
<th>Kaiser Permanente Senior Advantage</th>
</tr>
</thead>
<tbody>
<tr>
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<td>$37</td>
<td>$45</td>
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<td>$37</td>
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</table>

**Who should use this table?**

Employees who retired after Dec. 31, 2002, and retired with 20-24 years of service.

<table>
<thead>
<tr>
<th>Number of Medicare</th>
<th>UHC Senior PPO Premerise PPO</th>
<th>CIGNA Senior PPO</th>
<th>Presbyterian Medicare PPPO</th>
<th>Lovelace Senior Plan</th>
<th>Kaiser Permanente Senior Advantage</th>
</tr>
</thead>
<tbody>
<tr>
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<td>$108</td>
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</tr>
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<td>2</td>
<td>$119</td>
<td>$102</td>
<td>$116</td>
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<td></td>
</tr>
</tbody>
</table>

**Who should use this table?**

Employees who retired after Dec. 31, 2002, and retired with 15-19 years of service.

<table>
<thead>
<tr>
<th>Number of Medicare</th>
<th>UHC Senior PPO Premerise PPO</th>
<th>CIGNA Senior PPO</th>
<th>Presbyterian Medicare PPPO</th>
<th>Lovelace Senior Plan</th>
<th>Kaiser Permanente Senior Advantage</th>
</tr>
</thead>
<tbody>
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<td>$108</td>
<td>$92</td>
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</tr>
<tr>
<td>2</td>
<td>$119</td>
<td>$102</td>
<td>$116</td>
<td>$94</td>
<td></td>
</tr>
</tbody>
</table>

**Who should use this table?**

Employees who retired after Dec. 31, 2002, and retired with 10-14 years of service.

<table>
<thead>
<tr>
<th>Number of Medicare</th>
<th>UHC Senior PPO Premerise PPO</th>
<th>CIGNA Senior PPO</th>
<th>Presbyterian Medicare PPPO</th>
<th>Lovelace Senior Plan</th>
<th>Kaiser Permanente Senior Advantage</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
</tr>
<tr>
<td>2</td>
<td>$119</td>
<td>$102</td>
<td>$116</td>
<td>$94</td>
<td></td>
</tr>
</tbody>
</table>

Retirees should use the tables here (Table A is on the preceding page) to calculate their monthly premium sharing cost for medical insurance in calendar year 2008. The applicable monthly premium share amount will be deducted from your pension check.

### Table C

**Who should use this table?**

Employees who retired after 12/31/2002 with 20-24 years of service.

<table>
<thead>
<tr>
<th>Number of Medicare</th>
<th>UHC Senior PPO Premerise PPO</th>
<th>CIGNA Senior PPO</th>
<th>Presbyterian Medicare PPPO</th>
<th>Lovelace Senior Plan</th>
<th>Kaiser Permanente Senior Advantage</th>
</tr>
</thead>
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<td>$295</td>
<td>$292</td>
<td>$196</td>
<td>$212</td>
</tr>
</tbody>
</table>

**Who should use this table?**

Employees who retired after 12/31/2002 with 15-19 years of service.

<table>
<thead>
<tr>
<th>Number of Medicare</th>
<th>UHC Senior PPO Premerise PPO</th>
<th>CIGNA Senior PPO</th>
<th>Presbyterian Medicare PPPO</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$324</td>
<td>$229</td>
<td>$226</td>
<td>$100</td>
<td>$198</td>
</tr>
<tr>
<td>2</td>
<td>$394</td>
<td>$295</td>
<td>$292</td>
<td>$196</td>
<td>$212</td>
</tr>
</tbody>
</table>

**Who should use this table?**

Employees who retired after 12/31/2002 with 10-14 years of service.

<table>
<thead>
<tr>
<th>Number of Medicare</th>
<th>UHC Senior PPO Premerise PPO</th>
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<td>$292</td>
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<td>$212</td>
</tr>
</tbody>
</table>

Retirees should use the tables here (Table A is on the preceding page) to calculate their monthly premium sharing cost for medical insurance in calendar year 2008. The applicable monthly premium share amount will be deducted from your pension check.

### Table D

**Who should use this table?**

Employees who retired after Dec. 31, 2002, and retired with 15-19 years of service.

<table>
<thead>
<tr>
<th>Number of Medicare</th>
<th>UHC Senior PPO Premerise PPO</th>
<th>CIGNA Senior PPO</th>
<th>Presbyterian Medicare PPPO</th>
<th>Lovelace Senior Plan</th>
<th>Kaiser Permanente Senior Advantage</th>
</tr>
</thead>
<tbody>
<tr>
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<td>2</td>
<td>$119</td>
<td>$102</td>
<td>$102</td>
<td>$94</td>
<td>$116</td>
</tr>
</tbody>
</table>

**Who should use this table?**

Employees who retired after Dec. 31, 2002, and retired with 10-14 years of service.

<table>
<thead>
<tr>
<th>Number of Medicare</th>
<th>UHC Senior PPO Premerise PPO</th>
<th>CIGNA Senior PPO</th>
<th>Presbyterian Medicare PPPO</th>
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</tr>
</thead>
<tbody>
<tr>
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<td>$52</td>
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<td>$94</td>
<td>$116</td>
</tr>
</tbody>
</table>

Retirees should use the tables here (Table A is on the preceding page) to calculate their monthly premium sharing cost for medical insurance in calendar year 2008. The applicable monthly premium share amount will be deducted from your pension check.

### Table E

**Who should use this table?**

Employees who retired after Dec. 31, 2002, and retired with 10-14 years of service.

<table>
<thead>
<tr>
<th>Number of Medicare</th>
<th>UHC Senior PPO Premerise PPO</th>
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<tr>
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<td>$192</td>
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<td>$384</td>
<td>$332</td>
<td>$332</td>
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</tbody>
</table>
Important Rx drug benefit information for UnitedHealthcare members

Effective Jan. 1, 2008, members enrolled in one of the UnitedHealthcare (UHC) medical plans will receive their prescription drug benefit from Catalyst Rx rather than Phar

You can benefit by staying in-network when seeking dental service. By seeing a Delta Dental PPO provider, you can reduce your out-of-pocket costs by taking advantage of Delta's lower negotiated rates. Delta Dental Premium USA provider rates are also lower, but they are slightly higher. Regardless of the provider you choose, you will receive the same basic reimbursement of covered restorative services, as well as increased annual and lifetime maximums.

Employee Dental Plan options

The Dental Expense Plan (DEP) is the company-paid dental plan for employees and their eligible dependents. DEP covers certain preventive and diagnostic services in full and offers basic reimbursement of covered restorative services with annual and lifetime maximums.

Enrollment websites.

There is a link under the Resources section of the Employee and Retiree Open Enrollment presentations that will be mailed from Catalyst Rx and/or the Sandia Benefits department in the coming months.

BHE listened and took action: the improved Medical Plan Estimator Tool is available now!

The proposed schedule for the upcoming HS-64 inspection is:

- Scoping Visit — Dec. 11-12
- Onsite Planning — Jan. 14-18
- Data Collection — Jan. 28-Feb. 8
- Validation/Closout — Feb. 26-28

Catalyst Rx brings very competitive pricing that could change. The preferred drug list identifies which brand-name drugs will be covered at a preset price, which is not eligible for reimbursement. The majority (99%) of the retail network pharmacies that you regularly access will continue to be paid at the network rate with Catalyst Rx.

Since the HS-64 inspection teams will focus on line implementation of ES&H programs, these topical areas have designated Director Champions who will lead teams to determine the existence, adequacy, and level of compliance with ES&H programs across the Labs. Teams will routinely report status and evidence during periodic meetings. The intent is to identify strengths and weaknesses prior to the HS-64 inspection, demonstrating the ability to identify and resolve issues and document continuous improvement. By taking this approach, says Phil, the Labs can minimize the number of HS-64 findings and continue a process of self-improvement.

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Sandian Andres Tabios makes transition from Green Beret to Sandia Pro Force instructor

By Iris Aboytes

He could have been picking pineapple and cutting sugar cane like most of his family has done in Hawaii, but Andres Tabios (4212) took a different path. He joined the military and became a Green Beret. He didn’t just become a Green Beret — he trained soldiers to be Green Berets.

Andres grew up in a farm in a small village (barrio) in central Luzon, one of the three main islands in the Philippines. “We lived in a thatch house with dirt floors,” he says. “We had no electricity or running water.”

“We had no electricity or running water.”

Andres loved the military but hated being away from home. “I miss jumping out of planes but those days are gone,” he says. “I would go back and forth to the Philippines from time to time to keep in touch with his roots.”

“I think my daughters were actually proud of me,” he says. “It was awesome. I felt such joy. During graduation, I heard them murmur, ‘Dad is old, but he is getting a degree.’ I am OK with that. I know I am not a pup anymore, but I am proof that with perseverance, hard work, and sacrifice, most things are possible.”

“I miss jumping out of planes but those days are gone. I look forward to helping and contributing to Sandia. I am proud to be a Sandian.”

— Andres Tabios

IN TRAINING — Andres Tabios has traveled a long way from the pineapple and sugar cane fields of his youth in the Philippines to his role as a trainer with Sandia’s Pro Force.

His family planted rice in knee-deep water during the rainy season and harvested it during the summer. As a young boy he was up before sunrise. He would feed the pigs and chickens, take the water buffalo (kalabaw) to graze in the field, eat breakfast, and walk about one-third mile to school. He would perform the same chores after school. When Andres was in sixth grade he lived with relatives in Manila while he continued his education. During school breaks he would go back and forth to the farm. He moved to Hawaii with his family when he was 17 years old.

Andres joined the military after high school graduation. Joining the military was not something his family really endorsed. They agreed after he explained the advantages.

“I was a cook in the military,” he says. In reality, he spent close to half of his 23 years in Special Forces. He was a weapons specialist, an intelligence sergeant, and detachment intelligence sergeant, and detachment weapons specialist, an intelligence sergeant, and detachment intelligence sergeant. He was a senior cadre instructor for Special Forces at the US Army John F. Kennedy Special Warfare-Center and Schools at Fort Bragg, N.C. when he retired.

Andres loved the military but hated being away from his family. He and his wife, Somchit, have three daughters, Elizabeth, 21, and twins Andrea and Sandra, 23.

“When my daughters tell me, ‘Dad you weren’t there,’ it really bothers me,” he says. “I was away from home nine to 10 months out of the year. The operational tempo within the Special Operations community is very high. My wife is the nucleus and heart of our family. She made sure everything ran smoothly. She has been my number one supporter.”

After Andres retired from the military he became an instructor at the National Training Center (NTC), formerly the Central Training Academy (CTA). He trained government and non-government personnel in basic and advanced weapons marksmanship, tactical training, etc. While there, he had the opportunity to come to Sandia, and he took it.

“I truly appreciate the diversity of our Pro Force,” says Andres. “I am fortunate I can provide training from personal experience, not just from a book. I can enlighten the Pro Force on what terrorists would do, who they would approach, and how they themselves would feel. I have been there.”

After two and a half years of judging work, school, family, and studying, Andres was able to make his dream come true last year. With support from his family and Sandia, he earned a degree in criminal justice administration from the University of Phoenix. He had been taking classes all along.