

How might climate change affect forest ecosystems?

Researchers work to find out on OR reservation's 247-acre Walker Branch Watershed

The effects of climate change – including theories of an increase in temperatures, a rise in sea level and the submersion of coastal cities – are most commonly associated with one ecosystem: oceans.

But what are the effects of a predicted climate change on forested ecosystems?

To answer that question, researchers in the Environmental Sciences Division have an ideal laboratory — some 247 acres on the Oak Ridge Reservation known as the Walker Branch Watershed.

“Walker Branch Watershed is one of the most intensely studied forested watersheds in the world,” said environmental scientist Paul Hanson. “It is unique in that it is one of the few large-scale contiguous forests in the Tennessee Valley, and it is in public hands and available for study.”

Walker Branch Watershed was used as a research area long before the current studies on climate change activity began.

Before the Manhattan Project and the birth of Oak Ridge, the Walker Branch Watershed area was a mix of forest, sustenance agriculture and open woodland grazing. After the federal govern-

ment took it over in 1942, the watershed was allowed to return to its natural state, creating a second growth forest with a mixed age structure typical of deciduous forests of the eastern United States.

Since Walker Branch was established, the area has not been disturbed, except naturally by fires and by the invasion of insects such as the southern pine beetle.

One of the most important contributions the watershed has made to environmental study is its long-term record of forest watershed

ecosystem processes. Since the area was used for an International Biological Program in the late 1960s, ORNL scientists have measured the watershed's incoming and outgoing water, forest composition and development, atmospheric deposition (since 1980), and weather variables.

These long-term measurements provide a valuable baseline from which to study climate change-related questions, now the primary focus of the watershed. One way scientists have been looking at potential climatic change

impacts over the last decade has been the Throughfall Displacement Experiment. The TDE study looks at the impacts of possible future scenarios for climate change.

Since 1993, the TDE — a precipitation manipulation study — has simulated the increase and reduction of rainfall by one third. Throughfall is rainfall that has interacted with the forest canopy, resulting in modified water chemistry.

Many models of global climate predict that increasing greenhouse gases in the atmosphere will increase average global temperatures and alter regional levels of

(See WATERSHED, page 2)



ORNL researcher Pat Mulholland (left) and post-doctoral fellow Alan Steinman inject a radiotracer as phosphate into Walker Branch to study the uptake and cycling of phosphorus in streams.

‘Choose well’ is theme for Oct. 14 event

Information on benefits, fitness, nutrition available at fair

With major impacts from medical, technological and financial factors, the employee benefits landscape is ever changing. At this year's annual benefits fair – set for Thursday, Oct. 14, from 9 a.m. to 3 p.m. on ORNL's Main Street — lab staff members will have the opportunity to receive information to help them make good decisions about health, wellness, finance, education and other employee benefits.

This year's theme, “Choose Well,” emphasizes both the new ORNL Wellness Program and the importance of making good decisions about one's benefit options. The previous two events have firmly established the fair as a top-class program, with attendance doubling each year. ORNL Employee Benefits staff members, who sponsor the event, expect another significant increase this year.

The fair is held in conjunction with the annual Open Enrollment period — tentatively

scheduled for Oct. 11-29 — to provide employees the opportunity to learn more about their benefits and changes for next year and to ask questions of benefits providers in order to make informed choices.

However, this year's fair has been expanded significantly to provide information on numerous aspects of employee well being. With the launch of the Wellness Program, for example, the fair will have an increased emphasis on fitness, exercise and nutrition.

In a first for ORNL, the Knoxville Comprehensive Breast Center (KCBC) will bring a mobile unit and offer mammograms for those who have a hard time scheduling those yearly exams. Annual mammograms are covered under UT-Battelle medical plans, and KCBC is a member of both CIGNA networks. To schedule an appointment, call KCBC at 583-2926. Be sure to bring your insurance card to your appointment.

MEDIC will be on site collecting blood as part of their regularly scheduled blood drive. They will also be typing blood at the fair.

Tennessee on the Move will be promoting the ORNL Wellness Program initiative to help employees balance physical activity and healthy eating.

As in the past, ORNL Health Services, along with numerous local health service providers, will be promoting wellness and disease management through health screenings and educational materials.

Representatives from the mutual fund families in our retirement savings plan will be on hand to educate employees about managing debt, financing college or saving for retirement. ORNL Credit Union officials also will attend.

Local colleges and universities are participating to explain their programs and

(See FAIR, page 6)

Jian Shen receives PECASE award at White House

ORNL's Jian Shen is a recipient of the latest Presidential Early Career Awards for Scientists and Engineers (PECASE), presented in a White House ceremony.

Shen, a member of the Condensed Matter Sciences Division, was cited for his pioneering approach to the study of magnetism in nanostructured materials synthesis.

The Presidential Early Career Awards program was established in 1996 to encourage and recognize the work of the nation's young scientists and engineers and is the highest honor bestowed by the U.S. government on outstanding scientists and engineers beginning their independent careers. ORNL researchers have received 12 of the awards.

ORNL Director Jeff Wadsworth said Shen's recognition underscores the laboratory's efforts to attract the next generation of top scientists.

"Jian's award signifies not only his own achievements but also the value to the laboratory of the Eugene P. Wigner fellowships, which brought him to ORNL as a leading postdoctoral researcher. Jian represents the path ORNL is taking toward becoming the research institution of choice for the scientists who will chart the breakthroughs in emerging fields of research such as nanotechnology," Wadsworth said.

Shen's nanostructure research integrates novel fabrication procedures with sophisticated fabrication techniques and theoretical modeling to the design of nanostructured magnetic materials and complex oxides. As a member of the Low-Dimensional Materials



Shen

by Design Group, Shen has recorded a major nanotechnology breakthrough by using his novel growth procedures to form one-, two- and zero-dimensional iron nanostructures that open the way to advanced studies of nanomaterials' properties.

A key signature of Shen's research program is his mentoring and training of postdoctoral research associates and graduate students in nanoscience. Since arriving at ORNL, he has advised three Ph.D. students, one of whom received the prestigious National Nottingham Prize. He has also mentored five postdoctoral associates and two summer intern undergraduate students.

Shen has presented a number of invited talks, workshops and seminars to professional societies and has organized a nationwide collaboration in nanomagnetism research. His work represents a model for the research that

will be carried out in the Office of Science's Center for Nanophase Materials Sciences, currently under construction adjacent to the Spallation Neutron Source.

A native of Beijing, Shen came to ORNL in 1998 as a Wigner Fellow. He did undergraduate work at Zhejiang University in Hangzhou, China. He received his master's degree from the Chinese Academy of Sciences, Beijing, and his doctorate degree from the Max Planck Institut, Halle, Germany.

Shen's several honors and awards for his research include the 1997 Otto-Hahn-Medaille, given each year for outstanding theses; the 1993 Presidential Prize from the Chinese Academy of Sciences, given to the top 100 master and Ph.D. students; and the 2002 ORNL Awards Night Early Career Award for Scientific Accomplishment.

Watershed

Continued from page 1

precipitation. Elevated global temperatures are predicted to increase the incidence of drought – a key phenomenon simulated by the TDE.

The TDE also evaluates the response of the forest to soil conditions "wetter" and "drier" than normal for East Tennessee to determine how changes in rainfall affect forest growth and sustainability.

On an area roughly the size of four football fields, researchers divided the site into three square plots. Rainfall is collected in approximately 2000 sub-canopy troughs on a "dry" plot, moved across a control or "ambient" plot, and then distributed onto a "wet" plot.

By monitoring the forest's response to wet and dry scenarios, the project has shown that the forest can take more stress than originally thought.

"The take-home message in the rainfall manipulation study is resilience," Hanson said.

"Whether the trees are exposed to wet or dry conditions, they continue to grow the same, with little short-term influence of the imposed precipitation change."

In the 1980s, the watershed focused on the timely issue of acid rain deposition and its influences on forest and stream ecosystems.

By having the unique ability to "reinvent" its research focus every decade, the Walker Branch Watershed Research Area has been able to stand the test of time as a premier watershed research area.

In the late '80s and '90s, researchers looked at nutrient cycling, making the watershed renowned as the place where nutrient spiraling research was first demonstrated.

The early '90s brought interest in hydrology, examining the flow patterns of water through soil and how they control the chemistry of stream water. Researchers also studied how stream chemistry and grazing snails controlled algal communities. Also during that time period, researchers began to use instruments to measure the exchange of water vapor, carbon dioxide and energy between the atmosphere and forest as part of a large, international network called Ameriflux.

Over the years, as major environmental and hydrological questions have changed, the focus of the research at Walker Branch has evolved to meet those issues. However, with every new research project, the mission of the researchers to provide answers to the public's greatest environmental questions has remained the same.

"Society has expressed concern for the implications of climatic change," Hanson said. "We work for the government but we're working for society as well."—Amy Merrick

[Amy Merrick served as a Communications and Community Outreach intern from the University of Tennessee.]



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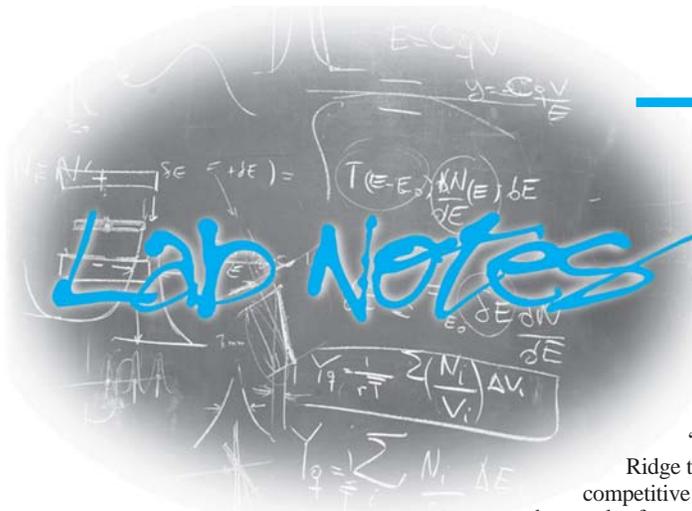
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Curtis Boles

Engineering Science and Technology Division summer intern Tim Burress is continuing his work at ORNL this fall. [See story on page 5.]



toward a new launching dock. Regatta organizers cite the facility improvements as a major reason, along with Melton Hill Lake's excellent rowing conditions, that the city was able to draw the national championship event.

"By helping make Oak Ridge the South's premier site for competitive rowing, we can attract thousands of rowers to the town's restaurants and hotels," said ORNL Director Jeff Wadsworth. "This gift is a great example of UT-Battelle's philosophy of providing legacy investments that make a lasting contribution to the community's economic development."

SNS folks row for needy

Spallation Neutron Source staff members recently competed in the Second Annual Dragon Boat Races at Volunteer Landing in Knoxville. (See below.) The race was a benefit for the Knox Area Rescue Ministries (KARM), and the event raised more than \$22,000 for the needy in our local communities.

Each competing team of 18-22 people gets two 1-hour practices the week before the race. With only a few experienced rowers, the SNS team made a good showing by qualifying for the gold championship round and by finishing third overall. The team was sponsored by UT-Battelle and SNS, and each participant raised money for KARM.

Row, row, row (part 2)

UT-Battelle has donated \$13,000 to the Oak Ridge Rowing Association, which recently drew more than 2,000 rowers to the 2004 Masters National Championship Regatta. The corporate gift joins donations of \$30,000 to the ORRA in 2000 for a finish-line tower and \$20,000 in 2002 for new starting docks. This year's funds will be applied



The SNS team heads out for the gold championship race.



Retirees Fred Sweeton, Bill Yee and Fritz McDuffie worked together in the old ORNL Chemistry Division.

Former co-workers reunited

ORNL retiree Bill Yee passed along a photo with fellow retirees that was taken at a recent celebration as he and his wife, Mabel, observed their 50th wedding anniversary. The party also served as a reunion for some former co-workers.

In the photo above right, Yee stands between Fred Sweeton (left) and Fritz McDuffie. Yee said he joined the laboratory's old Chemistry Division in 1952, having been hired by McDuffie. He was assigned to work under Sweeton, his first supervisor. Yee, who retired in 1996, now serves as a tour ambassador for the DOE Oak Ridge Reservation Public Tour Program.

Tennis, anyone?

It's often difficult for someone on a short-term assignment to get up a good game of tennis. If that's you, or if you're just looking for a game and are an intermediate player, an ORNL group has a deal for you. Just come to

the Jackson Square tennis courts in Oak Ridge any Saturday at 8 a.m.

You'll find a group of 15 or 20 men and women who get together for some round-robin tennis — mostly doubles — each Saturday. There is no charge and no commitment — just show up any Saturday when you feel like playing. For more information, call Jack Campbell, 482-7568.

ORNL recycles!

ORNL's recycling program is going strong. The Environmental Protection and Waste Services Division has announced the appointment of Debbie Dillener as the lab's new recycling coordinator, and she is providing lots of good information about the ORNL program, which involves the recycling of many materials, from paper and aluminum cans to toner cartridges and batteries.

The Knoxville Recycling Coalition "Purple Paper Eater" truck visits the ORNL site and off-site locations regularly to pick up our paper for recycle. And recycle we do! In 2003, ORNL recycled 257 tons of paper and SAVED 8,959 trees; 1,053,700 kilowatts of energy; 1,799,000 gallons of water; and 771 cubic yards of landfill space. This prevented an estimated 15,420 lbs. of air pollutants from entering the environment.

Aluminum cans are collected for recycling at ORNL in all buildings cleared for recycling. Buildings that have aluminum can collection have either blue metal drums or gray can crusher bins for collecting the cans. Tabs from the cans are collected in separate containers, and income from the tab recycling is donated to the Ronald McDonald house in Nashville. In 2003, ORNL recycled 3.6 tons of aluminum cans and SAVED 75,600 kilowatt hours of energy and 1,028 tons of bauxite ore.

More information on ORNL's recycling program can be found on the Pollution Prevention web page at <http://www.ornl.gov/adm/ornlp2/p2main.shtml>.

Researchers reach another resolution record: 0.6 angstrom

ORNL researchers, using a state-of-the-art microscope and new computerized imaging technology, have pushed back the barrier of how small we can see—to a record, atom-scale 0.6 angstrom. The laboratory also held the previous record, at 0.7 angstrom.

As reported in the Sept. 17 issue of the journal *Science*, researchers obtained the improved resolution with ORNL's 300-kilovolt Z-contrast scanning transmission electron microscope (STEM), aided by an emerging technology called aberration correction. The direct images have been acknowledged as proof of atom-scale resolution below one angstrom and provide researchers with a valuable tool for designing advanced materials.

"Looking down on a silicon crystal, we can see atoms that are only 0.78 angstroms apart, which is the first unequivocal proof that we're getting subangstrom resolution. The same image shows that we're getting resolution in the 0.6 angstrom range," said Condensed Matter Sciences Division researcher Stephen Pennycook.

An angstrom is an atomic scale unit of measure of one ten-billionth of a meter, approximately equaling the diameter of an atom.

The ORNL researchers teamed with the Nion Company to produce the images of pairs of silicon atom columns in a crystal. The Kirkland, Wash., firm provided the aberration

correction technology that corrects errors introduced to the images by imperfections in the electron lenses. Although conceived decades ago, aberration correction technology was only recently made feasible by advances in computational techniques and image-analysis algorithms.

Aberration-corrected microscopy provides a direct image with fewer opportunities for "artifacts," or incorrect image information. Uncorrected microscopy can achieve subangstrom resolution by combining a collection of many images to achieve an image, but it also increases the introduction of artifacts into the images.

By revealing columns of atoms and the position of introduced, "dopant," atoms, the atom-scale images enable a new understanding of materials' properties, Pennycook said. The finer images also enable researchers to more accurately model and predict the behavior of materials on computers before time-consuming and expensive bench tests are conducted.

"With aberration correction you can see everything better, basically,"

Pennycook said. "It's always better to see what's what. For the materials, chemical and nano sciences, you want to see what is going on at the atomic scale—how atoms bond and how things work."

In addition to Pennycook, an ORNL corporate fellow, team members are



DOE photo by Lynn Freeny

Steve Pennycook adjusts the 300-kilovolt Z-contrast scanning transmission electron microscope.

Matt Chisholm, Andy Lupini, Albina Borisevich and Bill Sides Jr. of ORNL's Condensed Matter Sciences Division and Pete Nellist, Niklas Dellby and Ondrej Krivanek of Nion.—*Bill Cabage*

Second Community Shares campaign set for October

For the second year, the Community Shares campaign is offering a charitable giving option for ORNL staff members, with the 2004 drive set for Oct. 1-29.

During the laboratory's first

Community Shares campaign in the fall of 2003, employees contributed more than \$16,000 to Community Shares and its member agencies.

Many UT-Battelle employees are long-time supporters of Community Shares and/or its member agencies, and the payroll-deduction option provides a convenient mechanism for spreading contributions over the year.

Those who might be unfamiliar with Community Shares will find a diversity of local community organizations working to build a stronger community. Some Community Shares member organizations will be familiar and have already been supported through Team UT-Battelle's volunteer work.

Community Shares member agencies do not overlap with those vital groups supported



by United Way. The United Way focuses on high-priority, direct human service agencies in our communities; Community Shares contributions support complementary non-profit, community groups that work to address root causes of problems such as hunger, health care, domestic violence, justice and environmental issues. The Community Shares mission is to support social change organizations in Tennessee in order to promote a more just and caring community.

There is no campaign goal for the Community Shares effort; ORNL employees will decide what they can and want to contribute.

Gifts to Community Shares have helped:

- Assist more than a quarter of a million women and children involved in domestic violence situations
- Provide housing, food and support groups to 8,000 people affected by HIV/AIDS and educate some 30,000 people about the causes and effects of AIDS
- Introduce the art, music, theater and dance traditions of various cultures to more than 100,000 children
- Recycle 5 million pounds of paper, saving the equivalent of more than half a million trees

- Clean some 8,000 miles of Tennessee streams and rivers.

Many Community Shares groups will be represented at ORNL's Volunteer Fair, set for Oct. 6 on ORNL's Main Street.

In addition, groups of Community Shares member organizations will be available on Main Street during the later weeks of October to provide information about their missions. The schedule includes groups emphasizing the following:

- Tuesday, Oct. 12 — Protecting Tennessee's environment
- Wednesday, Oct. 20 — Improving the lives of women and children
- Tuesday, Oct. 26 — Creating a just society

Times for the visits are 11 a.m. to 1 p.m. each day.

If you have questions about the 2004 drive, please contact Mac Post (postwmiii@ornl.gov; 576-3431) or Cindy Kendrick (kendrickcm@ornl.gov; 241-6584).

More information on the campaign and how to contribute is available on the web site at <http://www.esd.ornl.gov/~wmp/CS/>.

In DHS, other programs

Summer students find variety in ORNL experiences

The words “homeland security” are generally associated with the development of security-related technologies and strategies such as the improvement of airport security measures.

“People say ‘homeland security? Are you going to be checking luggage?’” said ORNL summer student Cary Girod.

But Girod’s studies have had more to do with trees and climate change than checking baggage. She is one of 15 students who participated in the Department of Homeland Security’s Scholarship and Fellowship program during the summer.

As an environmental science graduate student working on the prediction of fires as related to carbon storage, she is not a stereotypical homeland security researcher. But the scope of homeland security has expanded to include work in fields such as forensic science, mathematics and natural resources in an effort to ground students in good research methods to solve problems.

“Since homeland security is a new field, people in graduate programs don’t necessarily associate themselves with it,” Girod said. “Its definition is being defined daily. Anyone working in environmental science and homeland security is expanding the horizon of what it means to work in the field.”

Girod’s project involved modeling forest growth and predicting fires. Growing trees mitigates global warming because trees store carbon, keeping it out of the atmosphere. Fires release the carbon, contributing to the potential for climate change.

Lab hosts 20 RAM internship participants

Some students relax during the summer, take a break from studies, and go on vacation.

A select few, however, work on cutting-edge technology with some of the world’s leading researchers, make lifelong relationships with other students from around the world and get to know their way around the nation’s top multi-purpose national laboratory.

Those in the latter group were among the 20 college interns participating in the Research Alliance for Minorities Program at ORNL.

The RAM program gives talented, highly motivated student interns a chance to put their fresh ideas and energetic drive into action on high level research projects.

Funded by DOE’s Mathematical, Information and Computational Sciences, Office of Advanced Scientific Computing Research, the program encourages collaborative efforts between national labs and universities to improve the quality and diversity of the U.S. workforce. The project is administered through ORNL’s Computer Science and Mathematics Division.

RAM participants gain cooperative research experience with students and faculty from

“Fire is a risk to carbon storage,” Girod said. “And besides that, it’s a huge threat to people and property in the United States.”

The DHS program is designed to train scientists and engineers in the hope that they will work in the homeland security arena.

More than 2,800 students from across the country applied for the program that began last fall. Only 50 graduate fellows and 50 undergraduate scholars were chosen for the year-long positions that include research and internship experiences.

The students were able to choose a national laboratory or Homeland Security lab where they would be paired with leading researchers to conduct research for 8 to 10 weeks. ORNL hosted the largest group with 15 students.

“I believe students chose ORNL because of the variety of projects and our top-notch researchers,” said lab project coordinator Johnnie Cannon.

The DHS program is one of those administered through the Oak Ridge Institute for Science Education. ORISE administers most ORNL summer student programs, bringing students here to enhance their scientific knowledge and enthusiasm.

More than 500 undergraduate, graduate, post-graduate and post-doctoral students participate in summer research projects each year at ORNL. Through various funding sources such as DOE, ORISE helps students from across the country work side by side with researchers in a national lab setting.

“Most organizations are interested in the future workplace,” said ORISE’s Linda

other universities, as well as researchers from DOE’s national laboratories. The program is aimed at increasing the number of under-represented African Americans, Hispanic Americans and Native Americans in the workplace by encouraging students to pursue advanced degrees in science, mathematics, engineering and technology.

Program requirements include a research proposal, journal of research experiences, weekly seminars, project web page, oral and poster presentations, and research paper suitable for publication.

Colleges and universities represented by ORNL’s 2004 RAM participants included Fisk University, Middle Tennessee State University, Alabama A&M University, Mississippi Valley State University, Knoxville College, Southern Adventist University, the University of Tennessee, Wofford College, Livingstone College, the University of Texas and York College.

Research divisions hosting RAM students were Computer Science and Mathematics, Computational Sciences and Engineering, and Networking and Computing Technologies.—
Mike Bradley



Girod



Klapman

Holmes. “These programs benefit students by enhancing their academic programs and aid the lab through the students’ fresh ideas. We want them to enter tomorrow’s workforce.”

Each of the programs offered at ORNL requires a 10-week, 40-hour-a-week internship working with scientists and engineers on internationally recognized research.

“I really lucked out getting the perfect job for me,” said Engineering Science and Technology Division intern Tim Burress. “I’m even going to continue working here in the fall because I’m the only one who knows how to run this.”

Sarah Klapman, DHS intern working in Environmental Sciences, said she enjoyed the experience of working at a national lab. “It’s exciting to see how the laboratory works versus academia,” she added.

Students presented their summer research experience through the poster session offered at the end of their tenure. They were able to practice communicating science to other students as well as to ORNL staff.

ORISE also focuses on science programs that encourage students to pursue degrees in science and engineering before they hit the college campus.

Pre-college programs such as the Appalachian Regional Commission’s Summer Institutes are geared toward providing a total educational experience. Fifty-three high school students and teachers from some of the poorest counties in Appalachia dabbled in research for two weeks as part of the program. They worked on small research projects and traveled to local educational facilities.

In June, ORNL sponsored two one-week Summer Science Camps for elementary and middle school students at Freels Bend cabin. Students focused on science topics through field explorations and hands-on activities.

Holmes says she believes these programs will help improve the workforce of the future.

“Data have shown that when people participate in such activities, they are more likely to have careers in science and technology than those who haven’t had such experiences. We want to play a part in helping to train American scientists to fill these important roles.”—*Amy Merrick*

[Amy Merrick served as a Communications and Community Outreach intern from the University of Tennessee.]

educational opportunities in support of the educational assistance program.

Benefits providers will be on hand to explain the various ORNL benefit plans and programs.

Displays and demonstrations on safety, ergonomics and other programs will be available.

The popular seminar series continues to grow and has developed into a multi-track event, with breakout sessions on the following themes:

- Benefits basics: How to get the most out of your benefits
- The health care community: How the industry works and how to be a savvy consumer
- Health and disease management strategies
- Wellness and nutrition
- Financial planning
- Work-life balance

New Personal Health Assistance Program off to successful start

Matria Healthcare, provider of ORNL's new disease management program, is reporting very high levels of participation in the Personal Health Assistance Program (PHAP). As of Sept. 1, more than 60 percent of eligible employees and their family members had enrolled, a large percentage of enrollees for only the first eight weeks of the program.

The PHAP is available to all eligible participants in the Open Access and Option 1 medical plans; eligibility will expand to include participants in all medical plans beginning in January 2005.

Under the program, the Optum NurseLine provides employees and their covered dependents with access to the services of an experienced registered nurse 24 hours a day, seven days a week.

Participants can ask health questions, learn self-care tips or get information that can help them choose appropriate care for their situations. Simply call 1-888-233-4877.

The program provides one-on-one support for asthma, cancer, coronary artery disease (CAD), chronic obstructive pulmonary disease (COPD), congestive heart failure (CHF), diabetes and lower back pain. Pregnancy also is covered.

The goal of the program is to help employees and their family members understand their physicians' treatment programs and be proactive in following the courses of treatment.

Registered nurses, health educators, pharmacists and dieticians are available to assist participants and help answer questions, chart progress and identify complications related to these specific conditions. Matria's Quality Oncology team members also are

- Demonstrations and workshops on self-defense, Tai Chi, yoga and golf

As part of the Tennessee on the Move at ORNL initiative, Dr. Michael Zemel, director of Tennessee on the Move, will discuss his research on the connection between calcium and nutrition. Vanguard and American Funds are returning with top-quality presentations on financial management and investing.

HealthCare 21 and ORNL's Bryan Kendrick will discuss why health care costs so much and the impact of those costs on the laboratory. Medical, dental and other providers will conduct employee sessions to explain benefits choices for 2005.

So, whether your interest is in elder care for aging parents, investing tips and tricks, getting a chair massage, how the medical plan works, or tips from a golf pro, plan to spend some time on Main Street on October 14. Watch ORNL Today for full details.

available to provide specialized support for cancer.

Remember, covered dependents also can participate in the Personal Health Assistance Program.

If you are pregnant or diagnosed with cancer, you are strongly encouraged to immediately self-identify by calling the NurseLine to be connected with the appropriate care coordinators. Support from a team of specialists is just a phone call away.

This program is provided free of charge to employees and family members. UT-Battelle is shouldering the program cost as part of the overall strategy to improve the health and well being of ORNL employees and their families.

'Research Spotlight' is new fair feature

New at the benefits fair this year is the "Research Spotlight," envisioned as an opportunity for R&D staff to share their research as it relates to human health. The fair provides a unique opportunity to bring employees in contact with the wide spectrum of health-related research conducted at ORNL.

The setting will be informal, with a small tabletop or poster session formats to encourage interaction and discussion. As this issue of Reporter goes to press, here is the line-up of participants thus far:

- The laboratory's Nuclear Medicine Program will be featured, including a number of radioisotopes produced at ORNL that are currently used in international clinical trials or are under development.
- Rick Komistek, Computational Sciences and Engineering Division, will discuss his work on artificial joints
- The fair will feature the Life Sciences Division's award-winning work on microcantilever sensor technology, which has potential as a biosensor for detecting DNA sequences and proteins.
- Biological and Environmental Sciences staff members will present their work on mouse models for human neurological disorders.
- The multi-laboratory artificial retina project, which has promise for treatment of some types of blindness, also will be featured at the fair.

Service Anniversaries

40 years: Everett E. Bloom, Metals & Ceramics; J. Robert Hightower Jr., Nuclear Science & Technology

30 years: Debra A. Bostick, Chemical Sciences; Ernest Lee Henley, Dad James, Gregory Wayne Johnson, Jerry L. Martin, Harold C. Thornton Jr. and David N. White, Craft Resources; Kim N. Castleberry and Jeffrey E. Christian, Engineering Science & Technology; Sidney Marshall Adams, Environmental Sciences; Patricia Dreyer Parr, Facilities & Operations Dir.; D. Russell Overbey, Fusion Energy; Jerry R. Bentz, Health Services; Leola dye Harris and Robert M. McKnight, Logistical Services; Theodore J. Huxford and Lawrence E. Powell, Metals & Ceramics; Diane D. Oliver, National Security Dir.; Gary T. Mays, Nuclear Science & Technology; Robert Wayne Kennemore and Jerry L. Cotter, Research Reactors; David K.

Olsen and Carl Mike Hammons, SNS Accelerator Systems

25 years: Susan G. Perkins, Business & Information Services Dir.; Deborah (Debbie) S. Blazier and Bruce A. Moyer, Chemical Sciences; John B. Drake, Computer Science and Mathematics; Stephen W. Allison, Engineering Science & Technology; Patrick J. Mulholland and Colleen G. Rzy, Environmental Sciences; G. E. Ice and Glenda R. Carter, Metals & Ceramics; Sharon M. Robinson, Nuclear Science & Technology; Martha H. Carpenter, Quality Services

20 years: Marcus (Marc) B. Wise, Chemical Sciences; Larry Wayne Finch, Craft Resources; Sharon Sissy J. Jenkins, Facilities Management; Cliff Eberle, Metals & Ceramics; Joseph Martin Evon, Networking & Computing Technologies; Doyle M. Hembree Jr., Nuclear Science & Technology

'On the Move,' other wellness activities under way

Want to join your fellow employees in making small lifestyle changes that can have a great and positive impact on your quality of life? "Tennessee on the Move at ORNL" may be just the program for you.

The initiative, which was kicked off Sept. 27 on the lab's Main Street, is a six-week program based on the statewide "Tennessee on the Move" effort. The program is designed to illustrate how lifestyle changes such as eating right and exercising can greatly impact your quality of life, including good health.

"By increasing physical activity through something as simple as walking, lab staff members can reverse the trends that lead to obesity and illness," said Joan Lawson, ORNL wellness coordinator.

After registering on-line for "Tennessee on the Move at ORNL" following the kickoff, employees will be issued—first-come, first-served—a pedometer and a quick-start guide with tips and tracking tools.

According to Lawson, 2000 steps equal one mile or approximately 100 calories.

"With the pedometer, you'll be able to set your average normal walking baseline," she said "Then use the pedometer—and your feet—to track your steps and increase your activity. A typical goal is to increase your daily steps by 2000."

Lawson added that you also should reduce your food intake by 100 calories and get three

servings of low-fat dairy products a day. After six weeks, those who have successfully completed the course—which includes increasing your baseline of steps by at least 2000 and eating properly—will get a certificate. Participants also will be encouraged to permanently adopt this approach toward a healthier lifestyle.

For more details on "Tennessee on the Move at ORNL," see the Wellness Program website, <http://train.ornl.gov/eshq/Wellness/wellness-home.htm>.

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If soccer is a part of your fitness regimen, you'll be happy to know that the laboratory is establishing a soccer field as part of the



Kelly Beierschmitt, director of Environment, Safety, Health and Quality, represented the lab at the "Tennessee on the Move" kickoff outside UT's Neyland Stadium. The lab is participating as part of the ORNL wellness program.

Wellness Program. The new field, complete with goals, will be located alongside Bethel Valley Road between the Holifield Facility and at the east end of the swan pond.

Those interested in playing or practicing soccer must sign an "Assumption of Risk and Release Agreement" before beginning. Interested persons may contact Jean-Christophe Bilheux at 576-4851.

ORNL People

Sandy Holt of Audit and Management Services was elected president of the East Tennessee Chapter of the Institute of Internal Auditors. The IIA, an international professional association, is a leader, authority and educator for the internal auditing profession.

The Computing and Computational Sciences Directorate has announced the establishment of the Computing and Computational Sciences Fellowship and appointed as its first recipient **Jack C. Wells**. "The CCS Fellowship offers a rotational, two-year assignment for a highly motivated ORNL staff member to contribute to the strategic planning process of the laboratory, while continuing to pursue programmatic research activities," said Associate Director for Computing and Computational Sciences Thomas Zacharia. A former Wigner Fellow, Wells is a research staff member in the Computer Science and Mathematics Division.

Kathy Carney has been named director of the Environmental Protection and Waste Services Division. David Skipper had been acting director during the selection process while preparing for ORNL's ISO 14001 Registration. Carney brings 19 years of experience in managing environmental and radioactive-hazardous waste programs for government and private organizations to this position. She had been program manager for

Environmental and Waste Systems and led the effort to redevelop the ORNL Waste Certification Program. She previously managed the Waste Management Division at Brookhaven National Lab.

Sherrell Greene has been named director of the Nuclear Technology Program Office for the Energy and Engineering Sciences Directorate. He replaces Gordon Michaels, who became EES Chief Technology Officer in May. Greene is responsible for managing customer relationships, for programmatic reporting, and for organizing teams to address new programmatic opportunities. He

manages the Nuclear Technology Program Office and the Isotope Program Office, and the NRC Programs Office now reports to him. Greene had served as manager of ORNL's Space Fission Power Program and also currently serves as chief technologist for the DOE Space Reactor Technology Program.



Greene

New Staff Members

ORNL continues to grow. This feature lists new employees at the laboratory. Welcome to all.

Auroop Ganguly, Computational Sciences & Engineering
Richard Mills, Computer Science & Mathematics
Scott Studham, Computing & Computational Sciences Directorate
Grace Jackson, Craft Resources
Pierre Boheme and Stefanie Hopson, Facilities Development
Dana Glass and Ming Su, Life Sciences

Cristian Contescu and James Hemrick, Metals & Ceramics
Steven Parham, Networking & Computing Technologies
Michael Ritchie, Nonreactor Nuclear Facilities
Goran Arbanas, Andrew Souders and Dorothea Wiarda, Nuclear Science & Technology
Elizabeth Dagley, Quality Services
Roberto Kersevan and Nicholas Pate, SNS Accelerator Systems
Steven Howard and Mariano Ruiz-Rodriguez, SNS Experimental Facilities

International Festival is UW campaign highlight

The lab's 2004 United Way drive is wrapping up, with the well-attended International Festival serving as one of the last campaign activities.

Nearly 1,000 ORNL employees spent lunchtime on Main Street, enjoying food and entertainment highlighting the many cultures represented at the lab. All festival proceeds go to this year's United Way campaign.

At the annual campaign breakfast, drive co-chair Lee Riedinger announced that ORNL has a total of 317 Leadership Givers. Employees are recognized as Leadership Givers by contributing \$1000 or more or by donating 1.5 percent of annual salary. ORNL also recognizes Leadership Givers among bargaining-unit employees in two categories: Gold Level (contributions of \$500 or more) and Silver Level (\$250-\$499). Salaried employees on the weekly payroll who contribute \$500 or more (Blue Ribbon Givers) or \$250 to \$499 (Red Ribbon Givers) also are recognized.

The popular on-line auction, which last year featured such items as pottery, jewelry, ORNL logo items, framed artwork, hand-crafted afghans and gift baskets, will be held during October and will benefit the 2005 campaign. If you have questions about the auction, contact coordinator Carol Leffew at 574-5982 or leffewcj@ornl.gov. Descriptions and photos of auction items will be posted on the UW home page, http://home.ornl.gov/general/united_way/.



Curtis Boles

Serving goodies at the Eastern European Culture booth were, from left, Dave Poker, Renae Humphrey, Nancy Gray, Debbie Hudak and Kaye Habenschuss.

Scott Branham has served as chair for this year's campaign. The 2004 goal is \$750,000.

Team UT-Battelle volunteer fair to feature 40 exhibitors

Team UT-Battelle's **Volunteer Fair**, set for Wednesday, Oct. 6, has lined up 40 exhibitors to showcase volunteer activities and community volunteer opportunities. Find out about volunteer opportunities, or tell about your own cause, at this fall's event. Team UT-Battelle project representatives and officials from many charitable organizations will be on hand to let you know about their causes and associated volunteer opportunities.

"Volunteerism is an ORNL trait — UT-Battelle employees continue to demonstrate outstanding concern for worthwhile causes,"

said Bill Pardue of Communications & Community Outreach. "Team UT-Battelle assists and supports employees in their organized volunteer services to community projects."

Since 2001 Team UT-Battelle has sponsored events involving more than 1,900 employees who contributed more than 11,000 hours and raised nearly \$150,000. Details about Team UT-Battelle are available on the Team UT-Battelle Web page at <http://www.ornl.gov/info/news/cco/teamutb.html>.

Contact Brenda Hackworth

(hackworthbt@ornl.gov) or Pardue (pardueb@ornl.gov) for more information about the fair.

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Team UT-Battelle raised more than \$5,600 for the Five-County Memory Walk held to benefit the **East Tennessee Alzheimer's Association**.

In addition, golf ball drop ticket sales produced an additional \$600, and the on-line auction raised \$1,250, making this year's Team UT-Battelle contribution to the Alzheimer's Association \$7,500.



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