WIN 2013

DEPARTMENT OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH SCIENCES

environmental health news

OUR DEPARTMENT IS ABOUT... TECHNOLOGY AND ASSESSMENT

A Living Building

The new Bullitt Center—which opened April 22—may be one of the greenest, healthiest, most energy-efficient commercial buildings in the nation.

Workers installing steel siding over the insulation on the Bullitt Center.

Photo: John Stamets

The Bullitt Foundation's new center—constructed at the intersection of Madison Street and 15th Avenue in Seattle's Capitol Hill neighborhood—marries the tenets of healthy building and green building, and in doing so, may transform market and architectural norms.

More than 80% of Americans live in cities, and buildings account for 75% of our total electrical use. They consume enormous resources to heat, ventilate, and light. Added to the strain on the environment are the fossil fuels burned, the carbon dioxide released, and the tons of waste that end up in landfills.

"The way we construct buildings matters," said Joseph David, sustainability program manager for Point 32, the real estate development company involved in the Bullitt Center's construction. At the department's Environmental Health Seminar on February 14, David spoke about the center's goals to meet the Living Building Challenge, a sustainable building certification program. To meet the challenge, a project must demonstrate net zero energy and water, healthy air, and other performance-based imperatives.

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Bullitt's building captures all its water, cleans it, and reuses it. The solar panels on the roof convert energy from the sun. The materials chosen excluded any "red list" chemicals designated as harmful to human health and the environment. And building materials were largely sourced, extracted, manufactured, and produced within 500 kilometers of Seattle. The drywall they used, for example, came from a company in Vancouver, which extracts gypsum from neighboring Alberta.

We spend 90% of our time indoors, explained Howard Frumkin, dean of the School of Public Health and professor in our department. He sits on the Bullitt Foundation's board of trustees and was elected to a three-year term on the board of directors of the US Green Building Council in February, the first designated board position for a health professional. "Environmental health, in my view," said Frumkin, "ought to focus on the environments where people really spend time. So if you care about healthy environments, we need to care about indoor environments."

In addition to the green building tenets, the Bullitt Center promotes health, too. Unusually high ceilings allow every tenant to have direct access to daylight. Ten-feet tall windows open to allow fresh air inside. A glass-enclosed staircase commands views of the neighborhood and promotes exercise, too.

The double entendre in "living building" is intentional, explained Frumkin. "A building has a metabolism. It takes in energy, water, and materials, and it has a waste stream—just like an organism does."

A building has life inside, literally in the form of its inhabitants. Frumkin compares the construction of a building to the way a zookeeper prescribes a suitable habitat for an animal, one in which the animal can thrive. "If you build a building," he said, "you would like to be able to say: this is a healthy place in which people can thrive."

The specs for building "health" into the blueprint aren't extraordinary. They're common sense, really. "If you design a building to be a healthy human habitat, then you design into it physical activity, natural lighting, and comfortable temperature and humidity, and you design out of it toxic chemicals and other unpleasant exposures," explained Frumkin.

During his presentation, Joseph David illustrated how the Bullitt Center's construction has already been transforming the market, making it greener and healthier. One company reconfigured its product that seals the exterior of the building from water penetration, replacing the phthalates used with a non-toxic substance.

What does a greener and healthier construction mean for the people who will be working inside the new Bullitt Center? To find out, a team of department researchers, which includes Associate Professor Scott Meschke, is collaborating with Heather Burpee, a research assistant professor in the Department of Architecture. Burpee is also a health design specialist at the UW's Integrated Design Lab, which will be among the building's first tenants.

"People talk about the human microbiome: they're talking about a skin microbiome or a gut microbiome," explained Meschke. "The same is true of a building. It has its own microbiome."

Over a six-month period, the researchers will investigate the indoor ecology of the building, measuring temperature, relative humidity, and light by taking samples of what is in the air and on the surfaces.

The research project is supported by grants from the Bullitt Foundation and the UW Royalty Research Fund. The others involved from our department include Martin Cohen, senior lecturer and director of the Field Research and Consultation Group, first-year graduate student Vivian Tran (Environmental Health), and Nicola Beck, a research scientist in Meschke's laboratory. ■

(l to r) Rory Murphy, Joseph David, Howard Frumkin, and David Kalman at the department's Environmental Health Seminar. *Photo: Sarah Fish*

NEW FACULTY MEMBER AWARDED COMMERCIALIZATION GRANT

for healthcare diagnostic tool

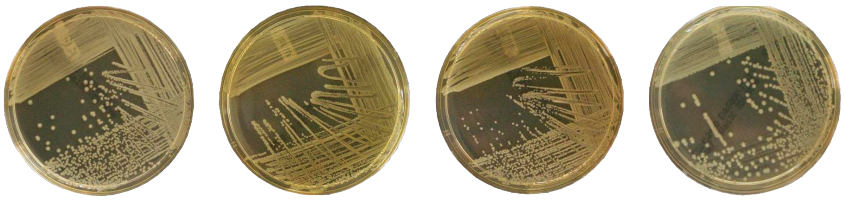
Professor Gerard Cangelosi was awarded a one-year, $250,000 grant to validate a new technology that will improve the diagnosis of hospital-acquired infections (HAIs).

According to the US Centers for Disease Control and Prevention, there are 1.7 million HAIs annually in the United States. These are infections that patients acquire during the course of receiving treatment for other conditions. Approximately 1 out of every 20 hospitalized patients will contract an HAI, which can be fatal. These infections contribute to 99,000 deaths annually.

Clinicians currently use microbiological culture methods to test patient samples for pathogens, looking for bacterial growth to determine the nature of a patient's infection. "The problem with that is three-fold," explained Cangelosi. Some types of bacteria won't grow in culture. The culture isn't sensitive enough when the patient has been exposed to antibiotics, as is common in healthcare environments, and the test takes one to four days to yield results.

"We think our test can detect things that culture cannot," said Cangelosi. And the test can do it in a mere four to six hours.

The technology behind his method—molecular viability testing—was developed in 2009. It can detect the DNA unique to each type of bacterium and determine whether bacteria present in the sample are still "viable" or capable of multiplying and causing infection.



Klebsiella pneumoniae | *Morganella morganii* | *Providencia alcalifaciens* | *Salmonella typhimurium*

Four nutrient agar plates grow colonies of common bacteria. *Photo: Donald Johnston*

Cangelosi worked with Associate Professor Scott Meschke, Research Scientist Kris Weigel, and PhD student Clarita Lefthand-Begay on a method to detect bacteria in environmental samples from water treatment plants. Less than a year later, the technology was licensed to AttoDx, Inc., a Seattle-based company focused on developing and commercializing pathogen detection and lab-on-a-chip products.

His current research uses the molecular test to screen samples collected from participants in a clinical trial conducted by another Seattle-based company. Performance of the prototype will be evaluated against the clinical and laboratory diagnoses.

The co-investigator on the grant is Paul Harris from AttoDx, Inc. Funding for the project comes from Washington state's Life Sciences Discovery Fund. ■

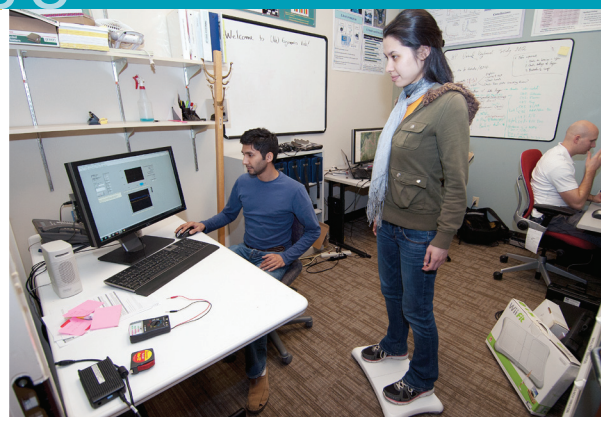
Photo: Sarah Fish

Gerard Cangelosi

Professor Gerard Cangelosi's appointment in the department began October 2012. He has worked extensively on infectious diseases, most notably in the areas of molecular diagnostics, environmental pathogens (especially detection and exposure issues), and epidemiology. His work in both public and private sectors has generated eight patents, two product launches, one start-up company launch, and more than 60 publications. These projects have addressed tuberculosis and related diseases, waterborne pathogens, enteric disease, periodontal disease, and hospital-acquired infections.

GRAD STUDENT USES *Wii Fit* TO MEASURE

truck drivers' balance



left: Three-quarters of falls occur when truck drivers are exiting the vehicle; right: Molly Halverson demonstrates how the *Wii Fit Balance Board* works. *Photos, l to r: Comstock/photos.com, Sarah Fish*

Nintendo's *Wii Fit Balance Board* is being used in a novel way. Second-year master's degree student Molly Halverson is using the inexpensive bathroom-scale-sized device to test the balance of truck drivers. Her project is part of a larger study to evaluate solutions to reduce whole-body vibration and determine whether whole-body vibration has any potential adverse effects on truck drivers' balance.

"One of the main causes of acute injuries in trucking is falls," explained Halverson.

According to the Washington State Department of Labor & Industries (L&I), the trucking industry ranks among the highest in workers' compensation claim rates and costs in the state. From 1997 to 2005, claims for drivers who fell from trucks totaled $69 million.

"Three-quarters of falls occur when drivers are exiting the vehicle, and we think prolonged exposure to whole-body vibration may be part of the cause," said Associate Professor Peter Johnson. Vibration is transmitted from the floor of the vehicle to the driver's seat and ultimately to the driver's body.

Halverson's study is supported through the department's allocation from the Washington State Medical Aid and Accident Fund. The study will evaluate a subset of subjects in a larger study funded by L&I's Safety and Health Investment Projects (SHIP). The purpose of the SHIP project is to investigate whether new air-suspension seats or the recently introduced active-suspension seats can reduce a long-haul truck driver's exposure to whole-body vibration. Prior UW research has shown that the recently introduced, active-suspension seats reduce a truck driver's exposure to whole-body vibration by 50% relative to the current industry standard, air-suspension seats.

Previous studies have demonstrated a significant difference between the balance shown by drivers before and after an eight-hour shift. Halverson's project will investigate whether a new air-suspension seat or an active-suspension seat reduces a truck driver's imbalance and the subsequent risk for falls when exiting the semitruck cab.

Designed for active play, the *Wii Fit Balance Board* tracks a user's movement and balance like a force plate does, but at only 1% of the cost. Using a desktop or laptop computer, the board wirelessly sends the balance data to the computer; then the user's front-to-back motion and side-to-side postural sway motions are saved. The board has been used in clinical settings to diagnose balance problems in people with neurodegenerative diseases or to evaluate balance in physiotherapy sessions, explained Halverson.

The user's movements are analyzed by a software program Halverson developed. The program displays and calculates how much a person leans away from his/her body's center of mass. The larger the balance-related spiral movements are, the more off-balance the person is.

Halverson plans to validate the *Wii Fit Balance Board* with the much more expensive force plate used by researchers at L&I to determine if the *Wii Fit Balance Board* can be used as a lower-cost tool for evaluating driver balance in larger-scale surveillance studies. ■

HELPING DETECT IEDs

The crude homemade bombs known as improvised explosive devices or IEDs have maimed and killed thousands of troops in Afghanistan and Iraq, and terrorists aren't likely to stop building them.

The best defense, the Army says, is to find the IEDs before they explode. Ideally, coalition forces could use electronic devices to find these threats, which can hide like a needle in a haystack.

That is where Professor Michael Yost comes in. His laboratory specializes in developing novel real-time and optical measurement instruments.

Under a US Department of Defense contract, his team will research spectroscopic technologies that can detect, localize, and quantify the volatile organic compounds and other hazardous materials in concealed explosives. These data will be provided to the prime contractor, Lattice Government Services, which will perform system integration and testing.

The sensor is a type of nanowire that was developed by Antao Chen, a principal scientist at the UW Applied Physics Lab and associate professor (Electrical Engineering). Nanowires can be as thin as one billionth of a meter and can be made of metallic, semiconducting, and insulating materials.

When made of silicon, they behave as resistors that are sensitive enough to respond to the vapors of common nitro-explosives and their by-products, Yost said. The sensitivity increases as the wires get thinner, and Yost hopes to develop an array of these sensors that can help troops detect those elusive threats.

US Army soldiers detonate an improvised explosive device while clearing a route in Afghanistan. *Photo: US Army photo by Spc. Derek L. Kuhn*

TUNNELING safely

What do a crew of underground workers, methane gas, and artifacts, like a boardwalk from the 1800s, all have in common? Tunnel construction.

To build Seattle's light rail system, construction crews are working underground and encountering everything from that well-preserved boardwalk to toxic gases.

As new rail and road transportation infrastructure increases in Washington state, so does the need to optimize safety. New technology is allowing tunnel construction through difficult terrain, in turn leading to new or changing health and safety issues for construction workers, contractors, and regulators. In addition, modern tunneling methods may expose workers to previously unanticipated pressures that could result in adverse health effects.

Our Continuing Education Programs are sponsoring a course to provide information to business owners, contractors, regulators, and health and safety professionals on best practices for safe tunnel construction. The course will be held on May 20–30, 2013 at the UW Tower Auditorium in Seattle.

For more information, see: *https://osha.washington.edu.*

Underground construction worker setting up to spray concrete on a surface. *Photo: Nancy Simcox*

HEALTH IMPLICATIONS OF THE

duwamish river cleanup

Dredging the Duwamish River; Poster for the April 18 Public Health Café *Photo: Colin Wagoner, Ridolfi Inc. 2004; Poster illustration: Jon Sharpe*

The director of the National Institute of Environmental Health Sciences (NIEHS) joined local researchers, government officials, and industry experts at a public forum on the health impacts of pollution in the Duwamish, Seattle's working river.

Our Center for Ecogenetics and Environmental Health (CEEH) hosted the April 18 forum as part of the annual meeting of the NIEHS-funded Environmental Health Sciences Core Centers.

Eight presentations were followed by questions and discussion. Speakers were Linda Birnbaum, NIEHS director; Robert Duff, program manager, Environmental Assessment Program, Washington Department of Ecology; BJ Cummings, community health projects manager, Duwamish River Cleanup Coalition; Valerie Segrest, nutritionist and Muckleshoot Tribal member; Rebecca Lindgren Chu, remedial project manager, Environmental Protection Agency (EPA); Professor David Eaton, CEEH director; Brian Anderson, who works in environmental remediation for The Boeing Co.; and Steve Curwood, host of Public Radio International's environmental program "Living on Earth."

The public forum provided an opportunity to hear various perspectives about the historical, environmental, cleanup, and health issues on the Duwamish.

The Duwamish has a long history as a free-flowing river that was channelized a century ago for industrial use. The Port of Seattle, Boeing, and other industries are located on the Duwamish.

The Duwamish Superfund site, a 5.5-mile stretch of the river that flows into Elliott Bay, is one of the most polluted places in the country. The EPA released its proposed cleanup plan for the site on February 28. The forum took place during the 90-day public comment period on EPA's proposed plan.

The diverse and historic neighborhoods along the Duwamish, including Georgetown and South Park, are home to a disproportionate number of residents who are low-income, Hispanic, or recent immigrants. The river is also part of the traditional fishing grounds of three Tribes.

Although a Washington State Department of Health fish advisory warns not to eat any resident fish or shellfish from the Duwamish River, health officials know that many people still harvest from the river, subsidizing their diets with contaminated seafood, either from economic necessity or lack of understanding or acceptance of the health risks. ■

SPEAKERS

coming to seattle

GREEN CHEMISTRY LEADER

Paul Anastas, founder of the field of green chemistry, was in Seattle in early May, speaking at our Environmental Health Seminar and at Seattle's Town Hall.

Anastas, director of the Center for Green Chemistry and Green Engineering at Yale University, is credited with establishing the field of green chemistry while working for the US Environmental Protection Agency (EPA).

Green chemistry is often referred to as the process of designing, manufacturing, and using products that eliminate or reduce chemical hazards.

That process is familiar in the field of industrial hygiene, which prefers eliminating hazards from the workplace, rather than protecting workers with personal protective equipment, such as respirators and gloves, says Nancy Simcox of the DEOHS Continuing Education Programs.

Simcox taught in a green chemistry awareness project sponsored by the New England Consortium at the University of Massachusetts Lowell.

The Puget Sound area is beginning to embrace green chemistry, she said, citing companies such as Staples, Boeing, and REI, which find that less-toxic industrial processes and products save money in the long run.

Anastas, who is author (with John Warner) of *Green Chemistry: Theory and Practice*, takes a broad view, touching on the design of safer chemicals, new reaction conditions, and alternative solvents. An overall goal is to understand the molecular basis of sustainability.

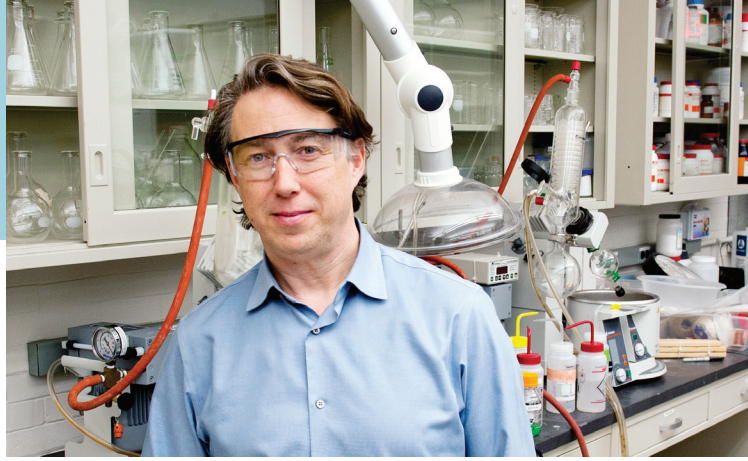


Photo: Angelo Lan

Paul Anastas

In our department, Professor Terrance Kavanagh is collaborating with UW chemical engineers and material scientists to design safer nanostructures through the UW Nanotoxicology Center. In 2010, Professor Elaine Faustman hosted the first green chemistry roundtable in Washington state in collaboration with state agencies and local hazardous waste management programs. Our department's involvement is designed to build capacity for researching, teaching, and implementing principles of green chemistry statewide.

Anastas visited with DEOHS faculty, students, and staff from May 8–10. On May 9, he led a departmental seminar, "Green Chemistry: Safer by Design," and conducted an interdisciplinary academic workshop for students from different programs across campus. He also spent a morning with staff from the Washington State Department of Ecology to discuss strategies for promoting green chemistry in the state.

The May 8 Town Hall presentation was part of The Seattle Science Lectures, in partnership with DEOHS, Washington Toxics Coalition, and the Sustainable Path Foundation. ■

FOOD SAFETY EXPERT

Erik Olson, director of food programs at The Pew Charitable Trusts, spoke at the May 2 Environmental Health Seminar. His talk focused on the new Food Safety Modernization Act and other protections for our food supply. He oversees work aimed at improving food safety, strengthening nutrition standards in the nation's schools, and reviewing the US Food and Drug Administration's regulation of chemical additives. In all, he has more than 25 years of experience in consumer, public health, and environmental policy and advocacy. While he was here, Olson met with DEOHS faculty, Dean Howard Frumkin, and colleagues from the Nutritional Sciences program.

Erik Olson *Photo: Courtesy of The Pew Charitable Trusts*

CHILDREN'S

environmental health conference

Tribal elders—the history-keepers of their people—don't recall children having asthma in the old days on the Tulalip lands. Today, they often care for asthmatic grandchildren, as asthma rates have doubled among Washington Tribes, says Gillian Mittlestaedt of Tribal Healthy Homes Northwest.

As bad as it is for Washington Tribes, it is worse among Alaskan Native children. In some parts of rural Alaska, up to a quarter of children are hospitalized each year for respiratory infections. When firewood is scarce, in tundras for example, people often need to use wet wood, or even driftwood—both of which produce highly toxic combustion byproducts, such as benzene. "In Native homes that heat primarily with wood, we often see immune suppression, lung infections, and severe asthma," Mittlestaedt said.

Mittelstaedt and four other presenters described the burden of wood smoke on children, as part of the second annual Children's Environmental Health Research Matters conference held on campus February 26. Sponsors were our Pediatric Environmental Health Specialty Unit (PEHSU) and Center for Child Environmental Health Risks Research.

Bruce Lanphear of Simon Fraser University presented the pros and cons of randomized controlled trials in children's environmental health. He noted that the strong evidence on the effects of lead poisoning were accomplished without controlled trials. "Epidemiologists are really skeptical," he said. "If they agree, it means something," he said in relation to lead poisoning.

Lead control is critical in developing countries, he said (see related story, page 11). "It could have a better cost-benefit ratio than vaccines," he said.

Another epidemic—obesity—was the topic of the talk by Pooja Tandon from UW Pediatrics. Nationally, only 44% of three-to-five-year-olds play outdoors at least once a day, she said. Those most likely to play outside are boys with regular playmates, whose moms stay home and take them out for exercise. Only half of home-based child-care centers take their children outside to play. "Kids in child care are sedentary most of the time," she said.

The conference drew 76 participants from academia, nonprofit organizations, health departments, and other governmental agencies around the region.

"This event highlights both the important research and applications in policy and programs on behalf of children's environmental health here in the Pacific Northwest," said PEHSU Director Catherine Karr. "It's great to see public health practitioners seated next to researchers in the audience and the connections being made—old and new—that link great research and communities." ■

"It's great to see public health practitioners seated next to researchers in the audience and the connections being made—old and new—that link great research with communities," said Catherine Karr (top right).

Photos: Sarah Fish

people & places

Professor **David Eaton** is the new dean of the UW Graduate School. His job involves supporting interdisciplinary programs, increasing training programs for graduate students, and offering more professional and master's programs. Eaton said he wants to increase financial aid for graduate students. He had been the UW's associate vice provost for research. He is also director of our Center for Ecogenetics and Environmental Health (CEEH).

Our Student Advisory Committee helped organize the UW Worker Memorial Day remembrance on April 24. Students **Lyndsey Banks, Edward Kasner, Trevor Peckham**, **Margaret Hughes,** and Monisha Sharma (Epidemiology) were involved, along with staff member **Nancy Simcox**.

Associate Professor **Catherine Karr,** director of the Pediatric Environmental Health Specialty Unit (PEHSU) has been appointed to the EPA Science Advisory Board and named associate editor of the *Journal of Agromedicine.*

Adjunct Assistant Professor **Sheela Sathyanarayana** (PEHSU) and colleagues had widespread media coverage for an article in the *Journal of Exposure Science and Environmental Epidemiology*, which reported unexpected results in a case-control study of exposures to phthalates and bisphenol A. The control—not the exposure—group had high urinary concentration of phthalates.

The **Fund for Excellence in Environmental Graduate Research** was started in fall 2012 through an initial donation from Veritox, Inc. It supports graduate students' research and travel to national meetings.

Eric Vigoren, research manager and scientist in the Institute for Risk Analysis & Risk Communication was nominated for the UW Distinguished Staff Award.

Professor **Harvey Checkoway** received new funding from the National Multiple Sclerosis Society to examine the link between ultraviolet radiation and multiple sclerosis. A considerable body of evidence indicates that Vitamin D, which largely comes from sunlight as ultraviolet B (UVB) radiation, protects against risk for multiple sclerosis. His project will help inform prevention strategies.

—continued on page 10

COMIC BOOK DESCRIBES NATIVE WAY

The Center for Ecogenetics & Environmental Health (CEEH) worked with Native Tribes to develop a 32-page comic book version of *The Return, a Native Environmental Health Story*.

This project began in 2008 with a collaborative grant from the National Institute for Environmental Health Sciences (NIEHS). The Northwest Indian College and the CEEH co-managed the project.

One of the goals of the Native TEACH Project was to find out how Native ways of understanding the world and our place in it differ from the Western concept of environmental health. Surveys, interviews, and talking circles identified three core themes of Native environmental health: community, wellness, and inter-relationship.

The Return was created from the findings. It is a dreamlike account of a Native woman and her baby, in which these three concepts are passed to the next generation.

The book was developed by Michelle Montgomery, PhD, senior fellow at the UW Center for Genomics & Healthcare Equality and a Tribal member, and Nicholas Salazar, a student at the Institute for American Indian Arts in Santa Fe, New Mexico.

Marilyn Hair distributed the book at the 2013 American Indian Higher Education Consortium Student Conference in Green Bay, Wisconsin, with more dissemination opportunities planned. *The Return* comic book is posted on the CEEH website: *http://depts.washington.edu/ceeh*.

people & places CONTINUED

Student participant at the Science Career Day at Jane Addams K–8 School. *Photo: David Adam Edelstein*

Staff members **Marilyn Hair** and **Trina Sterry**, alumna **Vickie Carper**, and graduate student **Tyler Vandivort** led a small-group presentation for Science Career Day at Jane Addams K–8 School. They discussed public health and environmental health, led an activity about pesticides and PON1 testing created by CEEH, and told what they do and how they became interested in science.

Dean **Howard Frumkin** is on the board of the US Green Building Council (the group that does LEED certification) and leads its effort to incorporate health into the green building movement. In February, he participated in a two-day summit at which this effort was launched.

Professor **Sverre Vedal** took part in a workshop in Brussels, Belgium, on "Understanding the Health Effects of Air Pollution: Recent Advances to Inform EU Policies." It was organized by the European Commission, the World Health Organization Regional Office for Europe, and the Health Effects Institute.

Professor **Evan Gallagher's** laboratory received a $500,000 grant from the Washington State Department of Ecology to assess the effects of emerging contaminants in Puget Sound salmon. He is collaborating with investigators from the National Oceanic and Atmospheric Administration National Marine Fisheries Service and UW School of Fisheries and Aquatic Sciences.

Staff members **Kathleen Egan** and **Terri Smith-Weller** recently trained health care providers in Eastern Washington on the use of the Functional Recovery Questionnaire. This five-minute survey, developed in our Occupational Epidemiology and Health Outcomes Program, can help identify which newly injured workers are at risk for months of missed work.

Debra Milek (School of Medicine), director of the Occupational and Environmental Health Clinic at Harborview, was appointed to adjunct associate professor in DEOHS.

Senior Lecturer **Charles Treser** will be conducting a course on healthy housing for practitioners in Mangilao, Guam, in July, at the request of the Guam Department of Health. The course is one of several offered through the national Healthy Housing Training Center and Network.

Departmental students, led by **Tyler Vandivort**, coordinated a boat tour of the Duwamish Superfund Site on April 27.

Two of our undergraduates, **Anna Fretheim** and **Momo Nakamura**, contributed articles to the most recent Association of Environmental Health Academic Programs newsletter.

Lecturer **Richard Gleason** has taken his safety training to the Port of Seattle, Boise's Safety Fest of the Great Northwest, the American Foundry Society, and the Voluntary Protection Program.

The Pacific Northwest Agricultural Safety and Health (PNASH) Center coordinated our department's participation in Agriculture Safety Day, held this year in Wenatchee. Speakers were **Gleason** and staff members **Victoria Breckwich Vásquez, Carlos Dominquez, Pablo Palmandez,** and **Marcy Harrington**. At least 61 people visited a mini health fair, which led to new connections at Columbia Valley Community Health and the Chelan-Douglas County Health District. Health fair presenters were staff members **Maria Negrete, Robin Russell,** and **Monica Zigman.**

Amelia Ramon, executive director of Radio KDNA/Northwest Communities Education in Yakima Valley, received PNASH's Outstanding Research Partnership Award at the April meeting of the community advisory board of *El Proyecto Bienestar* (The Wellbeing Project).

Senior Lecturer Emeritus **Lee Monteith** will be made a fellow of the American Industrial Hygiene Association at its May meeting.

PNASH is increasing its outreach in Oregon. Research Industrial Hygienist **Kit Galvin** recently gave three presentations in Portland and Salem.

Our **Continuing Education Programs** are working with Casa Latina on training related to chemical hazards and electricity.

Affiliate Professor **Gilbert Omenn** (former dean of the School of Public Health) and his wife Martha Darling have committed $100,000 to the School of Public Health to kick-start an Institute for Public Health Genetics research project fund.

Professor **Elaine Faustman** presented "Today's challenge for protecting children's health for a lifetime" at the Society of Toxicology Annual Meeting in San Antonio, Texas, in March. Several students, staff, and faculty presented posters at this meeting.

The 13th annual DEOHS **Student Research Day** will be May 30, 12:30–3:00 pm, at South Campus Center, room 316. Our graduating MS and MPH students will talk about their thesis or project work. ■

LEAD TESTING IN A VIETNAMESE VILLAGE

In Vietnam, many communities make money by recycling lead from used car batteries. Recycling activities, once conducted primarily in homes, result in widespread lead contamination. As a result, many children in these communities have high levels of lead in their blood.

Several DEOHS researchers, in collaboration with the Vietnamese National Institute of Occupational and Environmental Health (NIOEH), have studied these children and their environment, and helped find ways to clean up the contamination.

To help develop a lead remediation plan for one such village, Research Industrial Hygienist Gerry Croteau and Associate Professors Catherine Karr and William Daniell tested surface lead levels in the Dong Mai battery recycling village, using an XRF elemental analyzer.

Croteau describes the XRF as a device from the future, which can complete an elemental scan in 30 seconds. In two days, the team collected 225 measurements in nine homes and a school. Such an effort using conventional methods would have taken days with the results not available for a month. The instantaneous measurements allowed the team to consider possible exposure routes and better target monitoring efforts.

Along with a Vietnamese collaborator, Nguyễn Khắc Hoài Nam, they tested gardens, house dust, and schools. The trio also presented at the fourth International Scientific Conference on Occupational and Environmental Health in Hanoi, in November, which the UW co-sponsored with the NIOEH. Affiliate Professor Barbara Silverstein ran a two-day ergonomics workshop with a selected subgroup of her long-term training cohort.

Daniell and Karr organized a children's environmental health stakeholder workshop, which focused on the Dong Mai village. Then, they led a field trip to the village and met with local officials.

The funding comes from Daniell's Rohm and Haas Professorship in Public Health Sciences. An earlier study at the same village was conducted with Fogarty as well as Rohm and Haas funding.

Nguyễn Khắc Hoài Nam tests a vegetable garden in the village of Dong Mai using an XRF elemental analyzer. *Photo: Gerry Croteau*

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COMINGS & goings

Sun Young Kim, who has been a senior fellow, was hired as a research scientist in Professor Joel Kaufman's laboratory. New to his lab, but not to the department, is alumna **Elizabeth Spalt** (MS, Environmental Health, 2005), who is now a research scientist/engineer.

Tomomi Workman was hired on as a research consultant in Professor Elaine Faustman's laboratory.

Ke'ale Louie is a new research technician working in Professor Evan Gallagher's laboratory.

Assistant Professor **Victor Van Hee**, our Occupational and Environmental Medicine residency director, has left to enter private practice in Minnesota.

Ranjini Krishnan and **Anne Ho** have left the Kaufman research team. We wish them well. **Casey Olives**, has joined the Kaufman team as a research consultant.

Michelle Averill joined our faculty as acting assistant professor.

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