



DEPARTMENT OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH SCIENCES

ENVIRONMENTAL HEALTH

News

SCHOOL OF PUBLIC HEALTH AND COMMUNITY MEDICINE ■ UNIVERSITY OF WASHINGTON ■ WINTER 2004

CROSSING BORDERS

This issue of Environmental Health News is about crossing borders—literally and figuratively. Through the federally funded International Scholars in Occupational and Environmental Health program, we have trained researchers and clinicians on two continents. In this newsletter, we describe a project with school children in Costa Rica and a conference with health professionals from throughout Southeast Asia. Air pollution knows no boundaries, and we discuss air quality projects that span the US-Canada and Washington-Idaho borders. We also describe an international conference on the hazards of health care work.

ECOAMIGOS: LEARNING FROM LIFE'S LESSONS

OROSI, COSTA RICA—The children are young—only 9 or 10 years old—but they have been through much in their young lives. In August 2002, a landslide thundered down the mountain near their town, destroying 23 homes and burying seven people. More than 400 were left homeless.

From this tragedy came a learning opportunity. The children are now “ecoamigos.” They are learning how people can affect the environment—and how devastatingly the environment can affect people.

Orosi lies in a lush valley in Cartago province, southeast of the Costa Rican capital of San José. The valley provides hydroelectric power and water to the urban areas surrounding San José. It also provides a living for many coffee farmers. The big growers have plantations on the valley floor, while smaller farmers have cleared native vegetation from the hillsides and planted their beans.

Newspaper reports implicate land use decisions in the landslides. The Ministry of Atmosphere and Energy had raised concerns

the previous year about residential construction that dumped cleared trees into a gorge; backed-up water saturated the soil. A national commission on risk prevention raised concerns about excessive deforestation from intensive coffee culture.

While their parents may take a fatalistic approach of “landslides just happen,” the children have become more concerned and active, looking for connections with environmental causes, said Carlos Mata, a professor at Costa Rica’s Technological Institute and director of the ecoamigos program.

Mata, an environmental health scientist, became interested in working with children while he was doing graduate work in the Department of Environmental and Occupational Health Sciences. He spent a year in Seattle on a grant through the International Scholars program (see page 3).

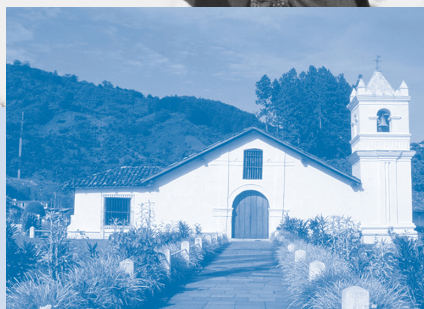
He and other University of Washington (UW) graduate students took a Tox-in-a-Box™ resource kit to Seattle-area schools to teach science concepts. The kit includes activities, slides,

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Kathy Hall



Carlos Mata teaches traditional games to children in Orosi, a town that takes pride in its church. Built in 1743, it is the oldest church still in use in Costa Rica.

and demonstrations for four grade levels: kindergarten to 3, 4 to 6, 7 to 9, and 10 to 12. In November 2002, international scholars from the University of Washington brought a Tox-in-a-Box™ kit to Mata, who had since returned to Costa Rica.

The science experiments interested the children in Orosi, but not as much as the immediate lessons that their valley could teach. For those, Mata reached beyond his box and into the community and its culture. Elders had told him that the young people have lost touch with the old traditions and the ways of the land.

Mata took the opportunity to work in the community. He introduced the before-and-after-school ecoamigos program. Through interactive exercises, students learn, for example, how the coffee trees and commercial forests have replaced native trees, driving away wildlife. "Our birds don't know these trees," he said. A nearby national park gives students a glimpse into an unspoiled valley. It has more than 45 different species of mammals including kinkajous, tapirs, and monkeys, and 260 kinds of birds, including the mysterious quetzal.

A puppet show acts out a forest fire in the national park, and is followed by a small-group discussion. Mata might mix up a toxic soup from his Tox-in-a-Box™ kit, and let the students find out how difficult it can be to clean up. "The students are very conscious of the environment," he said.

Another goal is to link the educational topics to traditional games of the community. Mata teaches his curriculum in English to third graders in the public school (Escuela Orosi), and in English and Spanish to second graders in the town's private school (Jardin del Valle or Garden of the Valley).

COMMUNITY SUPPORT

The educational program adds value to the community, Mata said. "By the end of the year you are an ecofriend—you have a commitment to the environment and to public health." A local hotel and restaurant provided ecoamigos T-shirts to the children.

The program has drawn other support from within and without the community. Mata met a member of the local Rotary club, who recruited students from Kalamazoo College in Michigan and volunteers from as far as Japan. A former volunteer from Japan sent money for a graduation party.

Mata also recruited his own students from the Technological Institute. They get fieldwork credits for a class in ecology and environmental issues.

At an annual community fair in August, ecoamigos from the past two years will paint a mural. This way, the community can see what the students are doing.

EDUCATIONAL ENRICHMENT

Lic Edwin Leiva Arneto, principal of the Escuela Orosi, says the program allows him to include topics such as water pollution prevention and reforestation in his curriculum. Costa Rica's ministry of education has asked principals to include these topics, but it is difficult to fit them into the regular curriculum. The school's science curriculum is geared to standardized tests, and allows little leeway for enrichment.

The education ministry also requires programs to be dynamic and participatory. "Because this program is outside the regular school schedule, it gives more time for games related to the environment."

Orosi

INTERNATIONAL SCHOLARS

He supports the ecoamigos curriculum because it is “situated in our community... Unfortunately, Orosi has problems with both (water pollution and deforestation),” he said through a translator. “The landslides have increased awareness of these two problems, especially reforestation, and it is a good fit with our community.”

Leiva has seen attitude changes in adults since the program started in the elementary school. People in Orosi seem more aware of environmental and public health issues than those in other parts of Costa Rica, he said. “The community is more concerned, and is following what the water and electric company do with more interest.” For example, he said, they are now demanding reforestation programs. “Change is coming slowly, but it is coming.”

FOR MORE INFORMATION

Tox-in-a-Box™ flier and order form:

<http://depts.washington.edu/ceeb/Outreach/k12.html>

International Scholars program

<http://depts.washington.edu/isoeh/>

Carlos Mata camata@itcr.ac.cr

Nación, September 2, 2002. Desastre:

Riesgo en Orosi fue advertido

(Disaster: Orosi risk was warned)

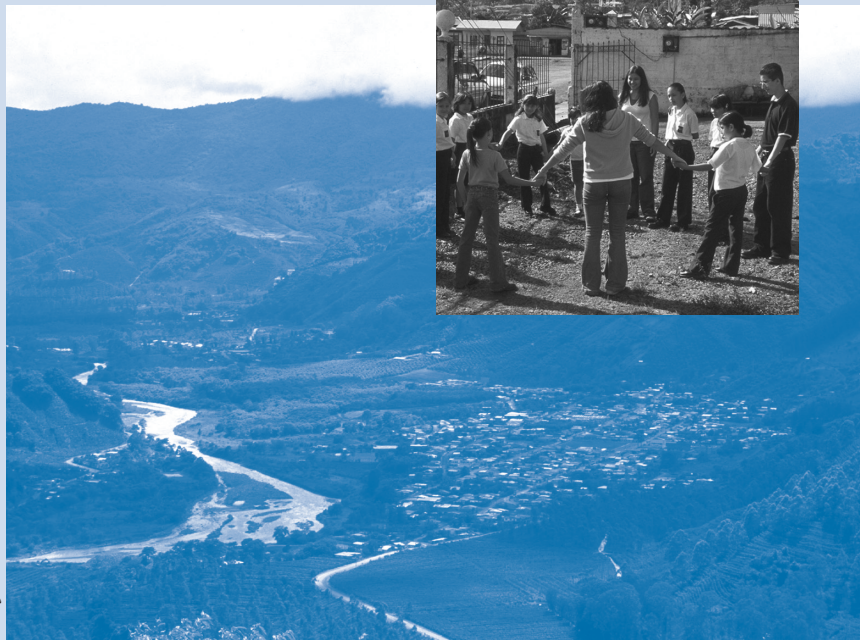
Steep hillsides surround Orosi. Some have been disturbed by transmission towers and other forms of infrastructure, and by coffee growing.

Carlos Mata and the Technological Institute in Cartago, Costa Rica, are partners with our department through the International Scholars in Occupational and Environmental Health. The program is funded through the Fogarty International Center of the US National Institutes of Health (NIH), the National Institute for Occupational Safety & Health (NIOSH), and the National Institute of Environmental Health Sciences (NIEHS).

The program provides training in occupational and environmental health to scientists and health professionals from Vietnam, Thailand, Nicaragua, and Costa Rica. The focus is on research projects that address high-priority problems in these countries. For example, Mata is researching occupational hazards of furniture makers in cottage industries in rural Costa Rica.

In addition to the Technological Institute, the partner institutions are the Central American Institute for Studies on Toxic Substances in Costa Rica, the National Autonomous University of Nicaragua, the Regional Center for Excellence in Occupational Health and Safety at Burapha University in Thailand, and the National Institute of Occupational and Environmental Health in Vietnam.

On pages 4-5, we describe the work with our Vietnamese partners.



Kathy Hall

G O I N G H O M E

Last summer, graduate students Son Phan and Phuong (Fanny) Nguyen traveled to Vietnam to work on occupational health and safety projects, and to renew ties with their families.

For Son, Vietnam was home, a place for him to hang out with old friends and ride his motorcycle around Hanoi.

Vietnam, however, was foreign and exciting to Fanny, who was raised in the United States. She met her grandparents for the very first time, saw where her parents grew up, and explored the places her parents always talked about.

While Fanny tried Vietnamese dishes that are never cooked in the US, Son nostalgically rediscovered the sophisticated taste of Vietnamese food he had left behind months before.

Fanny was surprised by occupational health and safety conditions in Vietnam. For example, she was concerned when she saw a worker stand on the edge of a tall building without any fall protection.

Son, on the other hand, knew that this is common in developing nations. Although he would like to do something about it, he knows that there are bigger priorities in a developing economy.

Son's project in Vietnam was to prepare for a two-week training course about silicosis, part of a



Janice Camp

project that would set standards for chest X-ray film. He has since returned to Vietnam to live.

Fanny's job was to sample silica dust levels among refractory brick workers, and compare US and Vietnamese sampling and analytical methods. She witnessed operations so dusty she could barely see the workers, some of whom were wearing just a gauze mask or handkerchief for protection.

They both gained a deeper understanding of how living and working conditions in Vietnam differ from those in the US. They saw the lack of resources, knowledge, and health awareness typical of developing countries. And they were able to get a better sense of their role in international health and safety.

Their work is supported by the International Scholars in Occupational and Environmental Health. Fanny also received a Bill and Melinda Gates scholarship through the Puget Sound Partners for Global Health.

—Son Phan and Fanny Nguyen

above: Fanny Nguyen and Dr. Bao Nguyen, director of the Laboratory of Dust Research at Vietnam's National Institute of Environmental and Occupational Health.

at left: A worker loads a wheelbarrow in the materials processing section of Cau Duong brick factory. The raw material contains bauxite, kaolin, and some silica dust.



Fanny Nguyen

H EALTH & SAFETY IN SOUTHEAST ASIA

The Department of Environmental and Occupational Health Sciences helped organize the first International Scientific Conference on Occupational and Environmental Health in Vietnam this fall. More than 450 people from 21 countries attended the conference, which was held in Hanoi in November. Delegates heard 121 papers on a variety of topics presented in Vietnamese and English.

It was the fifth time representatives from the provinces in Vietnam had met to present papers on work-place safety and health, but the first time they were joined by counterparts from all over the world. Seventy participants came from Southeast Asia, China, India, the South Pacific, Europe, the United States, Canada, and other countries. The focus was on sharing research and interventions to improve occupational and environmental health conditions.

Dr. Matthew Keifer, director of the department's International Scholars in Occupational and Environmental Health program, co-directed the conference with Dr. Le Van Trung, president of the Vietnamese Association of Occupational Health. The vice prime minister of Vietnam, Pham Gia Khiem, welcomed the international audience to Hanoi and to the conference.

"The best science is useless unless it can be implemented," said Dr. Chris Schonwalder, representing The Fogarty International Center of the US National Institutes of Health. He urged the development of good science as the basis for good policy decisions, setting the tone for the exchange of scientific information on a wide range of topics presented in plenary sessions and five simultaneous workshops.

Silicosis was the focus of several papers presented by Vietnamese delegates, who described its incidence among foundry workers, coal miners, and workers manufacturing construction materials. Safety and health in agriculture was another key topic, with presentations on pesticide exposures, the health of women agricultural workers, and injuries from tractor rollovers and threshing machines.

Foreign delegates presented research from their countries that might be relevant to Vietnamese safety

and health professionals and researchers. A participant from Taiwan presented a model for managing integrated occupational injury and disease prevention, compensation, and return-to-work programs. A researcher from the Netherlands talked about monitoring and evaluating exposure to allergens from experimental animals in a research facility. Policy topics such as environmental screening of foreign investments and comparisons of safety and health legislation and exposure limits in the Asia-Pacific region were also covered.

Vietnamese sponsors included the National Institute of Occupational and Environmental Health, the Ministry of Health, the Ministry of Labor, Invalids and Social Affairs. International sponsors were the World Health Organization, and the International Labor Organization. Sponsors from the United States were the Fogarty International Center, the National Institute of Environmental Health Sciences, the National Institute for Occupational Safety and Health, and the Liberty Mutual Research Institute for Safety, in addition to our department's International Scholars program.

The 6th National Conference in Occupational Health will be held in 2004 and the 2nd International Conference in Occupational and Environmental Health will be held in 2005. ■



Sharon Morris

Dr. Matthew Keifer puts on translation headphones. Dr. Le Van Trung is at the right.

AIR POLLUTION AND INFANT HEALTH



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Traffic from busy roads such as Interstate 90 could affect children's health, yet young couples rarely take that into consideration when house hunting.

Imagine you are a young couple, expecting your first child. You are shopping for your first house. You've got a long list of things to consider—schools, neighborhoods, and the commute to work.

Odds are that the list doesn't include locating far enough from busy highways so the baby doesn't get sick—but maybe it should.

A research team at the Department of Environmental and Occupational Health Sciences, in partnership with researchers in Canada, is looking into the question of whether infants living near busy highways or in areas with a lot of wood smoke get sick more often than babies who live farther away.

UW researchers Jane Koenig, Catherine Karr, Sally Liu, Joel Kaufman, Karen Jansen, and Tim Larson—from the EPA Northwest Center for Particulate Air Pollution and Health (PM Center)

and the Pediatric Environmental Health Specialty Unit (PEHSU)—have been awarded a grant from Health Canada to study the effects of air pollutants on both sides of the border.

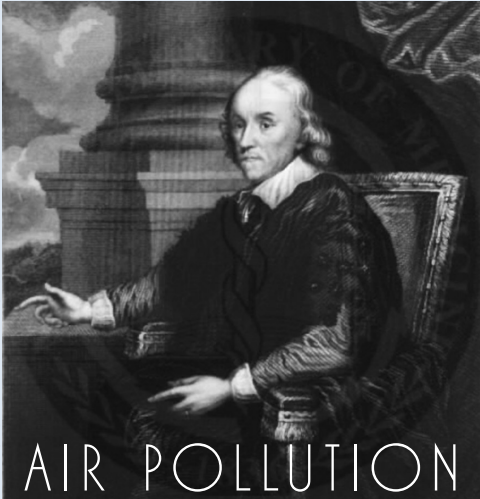
They will analyze hospital visits during the first year of life for bronchiolitis, a sometimes-serious upper respiratory infection. The study will compare associations between infant bronchiolitis cases and estimates of exposure to wood smoke and traffic in Seattle and Vancouver, using a type of epidemiologic study called a birth cohort study.

The research is based on the University of Washington team's previous asthma research in Seattle that showed associations between fine particulate matter, decreased lung function, and increased asthma symptoms in children. Researchers will also analyze children's visits to emergency departments and their hospitalizations for asthma.

The study is important, Koenig said, because it acknowledges the similarities between air pollution in the United States and Canada, and it examines health effects in a vulnerable group of subjects—babies during their first year of life.

Other studies have shown that proximity to densely traveled highways is a risk factor for increased prevalence of asthma and increased aggravation of asthma symptoms. "Source proximity is the strongest predictor of health impacts," said Michael Brauer, director of the School of Occupational and Environmental Hygiene at the University of British Columbia and a partner in the grant.

Each child's exposure will be calculated using a model that incorporates information on the residence's distance to a busy roadway, type of neighborhood (population density, wood stove density, and land use), and urban and local air pollution levels. The project will use a sophisticated geographic information system (GIS) database that incorporates factors such as topography and meteorology.



William Harvey, the 17th century scientist, was probably the first to record the link between sudden death and air pollution. In his account of an autopsy, transcribed by British researcher Robert Maynard, Harvey blames London's filthy air for killing Thomas Parr in 1635. Parr was said to have reached the remarkably advanced age of 152 when he moved from the countryside to London.

Harvey identified the effects of short-term exposure to high levels of air pollution on a vulnerable person. He attributed the cause of death to "the sudden adoption of a mode of living unnatural to him. Especially did he suffer harm from the change of air, for all his life he had enjoyed absolutely clean, rarefied, coolish, and circulating air, and therefore his diaphragm and lungs could be inflated and deflated and refreshed more freely."

By contrast, Harvey said, London was "full of the filth of men, animals, sewers, and other forms of squalor, in addition... there is the not inconsiderable grime from the smoke of sulphurous coal constantly used as fuel for fires."

FOR FURTHER READING

Harvey W. (1963). *The circulation of the blood and other writings*. Translated by KJ Franklin. Everyman's Library, No. 262.

Maynard RL. (2003). William Harvey and air pollution. *Occupational and Environmental Medicine* 60:147

OCEANS & HUMAN HEALTH

The Department of Environmental and Occupational Health Sciences will soon be home to a new center that will explore the role of oceans on human health. The center, to be funded by the National Institute of Environmental Health Sciences and the National Science Foundation, was formed in response to a growing recognition of the need to bridge scientific disciplines involving oceanography and public health.

The Pacific Northwest Center for Human Health & Ocean Studies—a collaboration between the UW School of Public Health & Community Medicine, and the College of Ocean & Fishery Sciences—will be a novel interdisciplinary effort that will engage scientists from throughout the Puget Sound region to investigate how environmental conditions can trigger blooms of harmful algae in marine waters and how these blooms can affect public health.

Researchers will study diatoms, algae that are central components of healthy coastal ecosystems, but can also produce a marine toxin known as domoic acid, which can harm the brain and nervous system.

Since 1991, high concentrations of domoic acid have repeatedly caused the Washington state Department of Health to close ocean beaches to tribal and recreational razor clam digging. This past September, commercial shellfish beds near Port Townsend were closed, in the first domoic-acid-based closure in Puget Sound.

Elaine Faustman, a professor in our department, will be the center's director, with E. Virginia (Ginger) Armbrust, from the School of Oceanography, as co-director.

The center will also include investigators from the National Oceanographic and Atmospheric Administration (NOAA), state departments of Health and Ecology, the Institute for Systems Biology, and the University of Maryland.

FOR MORE INFORMATION

206-616-7377 oceans@u.washington.edu



Clammers on a Washington beach.

SCIENCE, AGRICULTURE & PUBLIC POLICY

On the average, air quality in Eastern Washington falls within federal standards, but averages can be deceptive. A day that dawns with blue sky and ends in a cloud of smoke could have acceptable levels of air pollution—on the average.

Federal air quality standards are based on 24-hour averages. However, particulate air pollution in the Pacific Northwest is different from that in the east, where federal standards are developed. The health effects of western air pollutants—which include abundant organic matter from wood and plant burning—haven't been studied as extensively as those in the east and the dose-response relationship for the health effects of acute exposure is still unknown.

When wheat farmers burn their fields in the fall, sudden spikes in air pollution can trigger symptoms that may be scary or even fatal to people with asthma, emphysema, or other lung diseases, said Sally Liu, principal investigator on an air pollution measurement project in eastern Washington, jointly funded by federal, state, and regional air quality agencies.

Liu also is involved in the federal Environmental Protection Agency (EPA) review of standards for

particulate matter. The finest particles—about 1/100 the diameter of a human hair—are of particular concern because they can lodge deep in the lung.

Liu is also public health representative for the Washington state Department of Ecology's Agriculture Burning Task Force. In eastern Washington, the traditional method of cleaning, reviving, and preparing a wheat field for the coming growth season is to burn the past year's stubble in the fall. Ecology regulates agricultural burning in the state.

Field burning represents an environmental trade-off. It can kill pests and reduce the amount of pesticides needed the following year, yet the smoke from agricultural burning can contain air pollutants such as particulate matter (PM), nitrogen dioxide (NO₂), carbon monoxide, and organic compounds.

Controversy has surrounded the practice of field burning. When Dave Kalman, Joel Kaufman, and other University of Washington and Washington State University (WSU) researchers convened a meeting in Pullman this fall, they faced a divided room, with wheat growers sitting across the aisle from people who had sued them. One lawsuit, settled in 2001, charged Washington state with violating the Americans with Disabilities Act by issuing wheat-burning permits to farmers. The health effects study was part of the 2001 settlement agreement.

HEALTH EFFECTS STUDY

In fall 2002, the Northwest Center for Particulate Air Pollution and Health (funded by the EPA and based in the Department of Environmental and Occupational Health Sciences) conducted an eight-week field study in Pullman, WA, to measure exposure to smoke from agricultural burning and determine the related health effects in adults with mild to severe asthma. It is the first study ever on how field burning affects the health of people with respiratory problems.

Candis Claiborn, from WSU, recruited 32 students and staff with mild to moderate asthma. They consented to lung function tests and urine samples, which were tested for biomarkers of agricultural smoke. By examining the biomarkers in the urine,

*Dave Kalman
and Collen
Marquist
of our
department
talk with John
Aeschliman at
a community
meeting last
fall in
Pullman*



Kathy Hall

the researchers can estimate how much agricultural burning smoke the participants inhaled during the day. The amount of inhaled smoke can be linked to their lung function measures.

The subjects—who were paid a small stipend—were monitored from September through November 2002. Their homes were measured for particulate matter to estimate contamination from indoor and outside sources, and they agreed to wear a portable air quality monitor in a backpack for a few days. They kept a diary of their daily activities, asthma episodes, medications, and the food they ate (smoked meats could show up in the biomarker test).

Researchers also needed to know how a home is ventilated, heated, or cooled, because all these factors affect the amount of outdoor air pollutants that get inside. They placed several outdoor monitors around Pullman, an indoor air monitor inside each participant's home, and they asked the participants to keep detailed ventilation diaries. The study also looked at the chemical composition of the smoke to better understand just what might make people sick.

Information from the data could eventually be used to set better standards for particulate matter to better reflect its health effects. While the EPA set standards regulating small particulate matter in 1998, the mechanism of how exactly the tiny particles affect health is not well understood.

FOR FURTHER READING

Allen R, Larson T, Sheppard L, Wallace L, Liu L-JS (2003). Use of real-time scattering data to estimate the contribution of infiltrated and indoor-generated particles to indoor air. *Environmental Science & Technology* 37:3484-3492.

American Lung Association of Washington's outdoor air quality site

<http://www.alaw.org/airquality/outdoorairquality>

Daily burn forecast for eastern Washington

<http://smokey.ce.wsu.edu/agricult.htm>

Koenig JQ, Jansen K, Mar TF, Lumley T, Kaufman J, Trenga CA, Sullivan J, Liu LJ, Shapiro GG, Larson TV (2003). Measurement of offline exhaled nitric oxide in a study of community exposure to air pollution. *Environmental Health Perspectives* 111(13): 1625-1629.

Liu L-JS, Box M, Kalman D, Kaufman J, Koenig



Oregon Department of Agriculture

UPCOMING COMMUNITY MEETINGS

APRIL 26

11:30 am Compton Union Building, WSU, Pullman
(lunch served)

6:30 pm WSU, Spokane campus

For more information: marquist@u.washington.edu
206-616-6570

J, Larson T, Lumley T, Sheppard L, Wallace L (2003). Exposure assessment of particulate matter for susceptible populations in Seattle. *Environmental Health Perspectives* 2003; 111: 909-918.

National Agriculture Compliance Assistance Center fact sheet on agricultural burning

<http://www.epa.gov/agriculture/tburn.html>

Northwest Center for Particulate Air Pollution and Health Web site

<http://depts.washington.edu/pmcenter>



PEOPLE & PLACES



HS Photography

Sally Liu

Rolf Hahne retired in December as director of the Environmental Health Laboratory and member of the industrial hygiene and safety faculty. He is continuing with professional activities; in January, he attended a workshop on X-ray fluorescence detection for inorganic pesticides in Native American artifacts at the Arizona State Museum in Tucson.

The UW air toxics team, consisting of **Chang-fu Wu**, **Tim Larson**, **Alison Cullen**, and **Sally Liu**, received a team award from the EPA Region X that recognizes its “outstanding work in the field of air toxics.” The award was presented at the end of the Region X Air Toxics Summit in December.

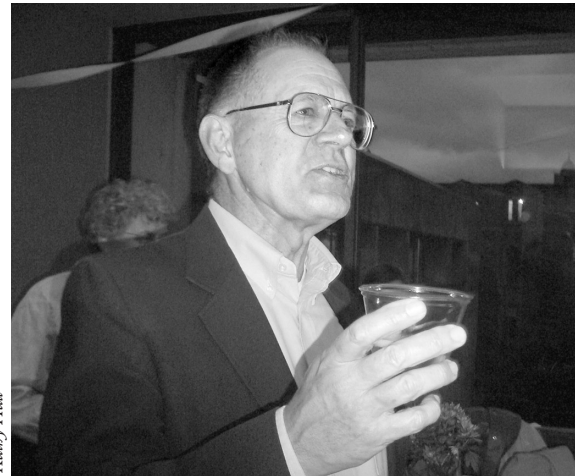
Rick Gleason presented two half-day sessions at the annual Western Pulp and Paper conference in Portland in early December. In January, he spoke to about 100 members of the Puget Sound Construction Safety Summit on how to avoid safety and health problems on construction sites.

Janice Camp organized the annual joint conference with the University of British Columbia’s School of Occupational and Environmental Hygiene. More than 100 researchers from the two schools met at the Semiahmoo resort near the Canadian border in January.

Mary Ellen Flanagan spoke at a construction safety conference in Chicago in February. She reported on a national data compilation project for silica sampling in construction.

Lori Winnemuller presented a paper at the Applied Ergonomics Conference in Orlando in March, entitled “the ability of supervisors and workers to accurately identify musculoskeletal risk.”

In December, Dr. **Patricia Boiko**, Dr. **Matthew Keifer**, and partners at the state departments of Labor and Industries, and Health, provided an on-site course on cholinesterase pesticide exposure monitoring at farmworker health care clinics in four regions across Washington state. Dr. Boiko has left the Pacific Northwest Agriculture Safety and Health center to pursue documentary film making with a fellowship from the Public Broadcasting Service (PBS).



Kathy Hall

Rolf Hahne at his retirement party

Several departmental investigators delivered papers at the annual meeting of the American Association for the Advancement of Science (AAAS) in Seattle in February. **Dave Eaton** organized a session on the human genome project and public health. **Lucio Costa** discussed work on genetic susceptibility to organophosphate pesticides and nerve agents, and gene-environment interactions associated with Parkinson’s disease. **Christie Drew** and **Doug Mercer** of the Institute for Risk Assessment and Risk Communication (IRARC) spoke about ways to make research findings accessible to the public and to policy-makers for the long-term stewardship of contaminated sites such as Hanford.

Associate Professor **Zhengui Xia** has been notified that her paper, “Opposing effects of ERK and JNK-P38 MAP kinases on apoptosis,” (*Science* 270(5240): 1326-31, 24 November 1995), was one of the ten most highly cited papers of the past decade in biology and biochemistry. Essential Science Indicators (ESI), which tracks science indicators and trend data, notified her of the distinction.

Chuck Treser presented a paper on training modules that incorporate the ten essential services of public health into environmental health practice at the 8th World Environmental Health Congress in Durban, South Africa, in February. While in Durban, he presided over the 7th meeting of the International Environmental Health Faculty Forum.



Devon DeLapp

Patricia Boiko



Devon DeLapp

Doug Mercer



Christie Drew



CONTINUING EDUCATION

To confirm this schedule or find more information about these courses, call 206-543-1069 or visit the Continuing Education Web site at <http://depts.washington.edu/ebce>. Courses are in Seattle unless noted.

NW CENTER FOR OCCUPATIONAL HEALTH & SAFETY

- Apr 8 Puget Sound occupational and environmental medicine grand rounds
- Apr 30 Shipping and receiving of hazardous materials for laboratory operations
- May 18-20 Occupational hazards to health care workers (*Vancouver, BC*)
- Jun 8 Puget Sound occupational and environmental medicine grand rounds

CONFERENCE MOVES TO CANADA

The department's 11th annual conference on occupational hazards to health care workers will be held May 18–20, 2004 in Vancouver, BC. Enough Canadians came to last year's conference in Seattle that organizers decided to hold this year's conference in British Columbia, said Sharon Morris, the department's assistant chair for outreach. The University of British Columbia is co-sponsoring the conference, and Lydia Ma of the UBC School of Occupational and Environmental Hygiene is co-director with Morris.

The conference is designed for health care and safety and health professionals, researchers, managers, union representatives, and others who are involved in preventing injuries and illness in a variety of health care settings.

Sessions will address hazards such as lifting, handling dangerous drugs, exposure to anesthetic gases, blood-borne diseases, workplace violence, SARS, shift work, staffing levels, needle sticks, bioterrorism preparedness, and emotional hazards of health care work.

For more information, go to http://depts.washington.edu/ebce/NWcenter/course/Health_Care_Workers-04.html

OSHA TRAINING INSTITUTE EDUCATIONAL CENTER

Not for OSHA rules only! All classes offer training that meets WISHA, OR-OSHA, and Alaska state standards.

- Mar 22-24 OSHA 2225: Respiratory protection (*Portland*)
- Mar 22-25 OSHA 521: Guide to industrial hygiene
- Mar 29-31 OSHA 503: General industry trainer update
- Mar 29- Apr 1 OSHA 6000: Collateral duty for other federal agencies (*Spokane*)
- Apr 5-8 OSHA 500: Trainer course for construction industry
- Apr 5-8 OSHA 511: General industry standards (*Portland*)
- Apr 12-15 OSHA 6000: Collateral duty for other federal agencies
- Apr 19-22 OSHA 521: Guide to industrial hygiene (*Portland*)
- Apr 20-23 OSHA 500: Trainer course for construction industry (*Boise*)
- Apr 26-28 OSHA 502: Construction trainer update
- Apr 27-30 OSHA 3095: Electrical standards (*Portland*)
- May 3-6 OSHA 501: Trainer course for general industry
- May 4-6 OSHA 2250: Principles of ergonomics (*Portland*)
- May 17-20 OSHA 501: Trainer course for general industry (*Portland*)
- May 24-26 OSHA 2264: Permit-required confined space entry
- May 25-28 OSHA 2015: Hazardous materials (*Anchorage*)
- Jun 1-4 OSHA 2045: Machinery and machine guarding (*Portland*)
- Jun 1-4 OSHA 510: OSHA standards for construction
- Jun 14-17 OSHA 3010: Excavation, trenching, & soil mechanics
- Jun 22-25 OSHA 511: General industry standards (*Spokane*)
- Jun 23-25 OSHA 2264: Permit-required confined space entry (*Portland*)
- Jul 6-9 OSHA 511: General industry standards
- Jul 12-15 OSHA 3095: Electrical standards
- Jul 12-15 OSHA 510: OSHA standards for construction (*Portland*)
- Jul 19-20 Supervisory safety & health duties (*Boise*)
- Jul 21-23 OSHA 2225: Respiratory protection
- Jul 26-29 OSHA 3110: Fall arrest systems (*Portland*)

HEALTHY HOMES

The Seattle-King County Healthy Homes Project has been recognized as the nation's top public-sector program for promoting healthy lifestyles. Health and Human Services Secretary Tommy G. Thompson included it among the eight winners of the first Innovation in Prevention Awards.

The Healthy Homes Project is a partnership of our department, Public Health Seattle & King County, Seattle Housing Authority, the King County Asthma Forum, and others, with additional support from the Centers for Disease Control and Prevention, Hoover Vacuum Co., and Seattle Solid Waste Utility.

The goal is to help children with asthma reduce the frequency and severity of their attacks by providing their families with education and resources to make their homes friendly to children with asthma. The project has helped reduce the number of days children have asthma symptoms by 60% and the proportion of children using emergency health services by 64%. "Healthy Homes" features have been included in 1600 new housing units in the county.

DEOHS participants included Tim Takaro, Nancy Beaudet, and the Environmental Health Laboratory.

FOR FURTHER READING

<http://www.metrokc.gov/health/asthma/healthyhomes/index.htm>

<http://www.bhs.gov/news/press/2003pres/20031210.html>

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