

DEPARTMENT OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH SCIENCES

## environmental health news



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OUR DEPARTMENT IS ABOUT... TRAINING STUDENTS

Students in our department work with faculty on important public health problems and receive hands-on training. Pictured above, Chair David Kalman and visiting undergraduate student Jeffrey Jacquez prepare to test urine samples for arsenic levels.

Photo: Sarah Fish

## OUR HEALTH IS IN GOOD HANDS

This past academic year, our department graduated 25 bachelor's, 29 master's, and 5 doctoral degree students. They will join other distinguished alumni who have made careers in industry, academia, and policy-making agencies, and who make important contributions to the field of environmental and occupational health. Our students, alumni, and faculty share a common concern for environmental and occupational health and a vision for a better, safer future. Even more than that, "we have the skills to make it possible," says Julie Wagner, a graduating master's student in Exposure Sciences and one of the speakers at the 2010 department graduation. Public health is in good hands.

In this issue of *Environmental Health News*, we recognize some of our past and present faculty for the progress they've made toward improving environmental and occupational health. We congratulate our graduates and feature some of their research. Finally, we showcase opportunities our department creates for continuing education, research collaboration, and multidisciplinary study. ■

## ENDOWED LECTURESHIP

# in honor of Peter Breysse



In memory of Associate Professor Emeritus Peter Breysse, who died on May 10 at the age of 87, his family and the Department of Environmental and Occupational Health Sciences have established an endowed lectureship to honor and recognize his dedication to worker and public health.

When the Department of Environmental and Occupational Health Sciences was formed, Peter Breysse was one of its founding faculty members. He was instrumental in the development of the industrial hygiene program. Active nationally and in local professional communities, Breysse was always on the ground floor of emerging public health issues.

A tireless advocate, he worked to improve people's health. A journalist from *The Seattle Times* dubbed Breysse the "Ralph Nader of the Northwest" in a 1986 story about Breysse's persistence and determination to protect the public from exposures that industries deemed harmless.

"He wasn't always very popular. But he was tough about holding his ground in what he believed," says Jack Hatlen, associate professor emeritus, who remembers when Breysse was hired in 1957.

Breysse tested mercury vapor exposures in dental offices

and measured noise levels around the Seattle-Tacoma airport when the Port of Seattle embarked on a major expansion plan, and residents of the area filed lawsuits. He evaluated air quality in the Metro sewer system when its tunnels were first excavated. He studied heaters linked to carbon monoxide camper deaths and reported a need for safety regulation changes.

Senior Lecturer Emeritus Lee Monteith remembers, "Peter had a crusade to detect formaldehyde in homes and mobile homes throughout the Northwest in the '70s and '80s."

Formaldehyde is a colorless, strong-smelling chemical used in building materials and to produce many household products. Exposure to the chemical may cause watery eyes; burning sensations in the eyes, nose, or throat; coughing; and skin irritation; and long-term exposure has been linked to cancer. Breysse tested hundreds of mobile homes in Washington, Oregon, and Idaho and determined that formaldehyde

"On a moment's notice, after a phone call from homeowners who were having symptoms, Breyse (left) would head out to their house, taking his little test kit to measure the formaldehyde levels in homes," recalls Lee Monteith.

*Photo: June 1977, James Snedden, University Photography*

exposure came from deteriorating particle-board insulation or insulation sprayed under flooring or in some rug materials.

According to his son Patrick, a professor in industrial hygiene at the Johns Hopkins Bloomberg School of Public Health, Breyse's groundbreaking research on formaldehyde helped to establish the field of indoor air pollution. "He was passionate about the need to protect people from harmful effects of chemicals in the home, school, and workplace."

He cared deeply about public health, says Professor Emeritus Jane Koenig, who has been in the department for more than 30 years. She remembers him regularly visiting the offices of fellow faculty members, asking them each time, "What are you doing to bring exposures down?"

Breyse chaired the American Conference of Governmental Industrial Hygienists (ACGIH), served on the ACGIH Physical Agents Committee and the American Board of Industrial Hygiene, and worked persistently to advance the profession. He recommended setting exposure levels for workplace chemicals to avoid adverse health effects and better protect workers who are exposed day after day. "Peter was way ahead of his time in recognizing certain preventative measures that people should take," says Hatlen.

Over a 40-year tenure in the profession, Breyse mentored students and influenced many of them to enter the field. He can be credited with populating the ranks of industrial hygienists throughout the country.

The endowed lectureship in Breyse's name will enable the department to recruit national and international speakers to share new ideas and inspire faculty, staff, and students to continue his legacy.

## For more information

2007 interview with Peter Breyse, School of Public Health

History Project: <http://tinyurl.com/PeterBreyse>

## To support the lectureship

Donations for the lectureship can be made online at <http://depts.washington.edu/envhlth/giving.php> or by contacting Tamara Burdic at 206-221-6343 or [tamarab@u.washington.edu](mailto:tamarab@u.washington.edu). ■

# MICHAEL YOST CONTRIBUTING TO THE dialogue



## Worker Exposures from BP Oil Spill

By July, nearly 30,000 workers were already in the Gulf of Mexico, cleaning up oil spilling from the BP offshore rig Deepwater Horizon. Because limited data exist on workers' long-term exposure, concerns have been raised about workers' health and safety.

The National Institutes of Environmental Health Sciences, US Department of Human Health Services, Occupational Safety and Health Administration, US Environmental Protection Agency (EPA), and a number of other agencies are working together to closely monitor for illness related to the spill, provide safety guidelines, and respond to human health issues in the region. Professor Michael Yost is a member of an EPA advisory board that provides advice on setting guidelines for human health effects and exposure and risk assessment. *EH News* talked to Yost about concerns for workers in the Gulf region.

### Q: What are workers' potential exposures?

A: There is potential for inhalation and dermal exposure. For the workers on shore, there is some risk from exposure to the carcinogenic compounds in oil. Crude oil contains a mixture of volatile hydrocarbon compounds and polycyclic aromatic hydrocarbons (PAHs). Skin exposure is largely preventable with appropriate personal protective equipment. However, they may still be exposed to what is in the air—they may inhale PAHs and other compounds, but not necessarily at a concentration that is harmful.

For workers on vessels involved in burning oil, exposures would primarily be particulates from smoke and oil, PAHs in the oil, and compounds created as a result of burning. Short-term health effects from burning oil are respiratory and eye irritants. Long-term, some of the compounds in the oil, principally PAHs, can cause cancer.

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**Q:** The EPA has been monitoring air quality levels for ozone and particulates on the Gulf coastline. Does the location of the sampling matter? Is monitoring for different compounds important?

**A:** There is always variation in space and time in the concentration of these contaminants. Once they are in the air, they blow around, they get diluted. Typically, there are higher concentrations closer to the source. Measuring right on the beach may be important, but it doesn't really tell you what the workers are exposed to. Workers are moving in and out of the area, picking up material, and moving the air and sand around with their activities. Their likelihood of exposure near the oil is considerably higher than 50 yards away. Sampling the air space in the workers' breathing zone is the only way to accurately measure their personal exposure.

Second—we can't just measure one thing. In the Gulf, a very complicated mixture of hydrocarbons is present in the oil. Some are volatile enough to get into the air. Some are not. To know the composition, we need to measure a broad set of hydrocarbons, and then from the lab analysis, we'll know what is showing up most frequently and what we need to focus on in terms of control and worker protection.

**Q:** Some cleanup workers are not using respiratory protection. Do workers need it or not?

**A:** These questions can't be answered without personal exposure measurements. We need to know what these workers are being exposed to in order to adequately determine whether they need respirators, and if so, what type, and how long do they have to wear them and for what kinds of activities. Workers have to be medically cleared because a respirator can make breathing more difficult. And, a respirator can reduce the amount of work a person can do, so workers should have frequent breaks and lots of hydration because of the extra heat load. ■

# DEOHS FACULTY

## JANE KOENIG

### PIONEER IN AIR POLLUTION RESEARCH



Jane Koenig was hired by the department 36 years ago to lead human research studies on common air pollutants. In July, she was appointed professor emeritus and lauded for her contributions to teaching and mentoring

students, and for her research on the health effects of air pollution, and in particular, its effects on children.

Koenig credits collaborations with other departments and agencies as fundamental to her research. Working with pediatrician William Pierson led to the first air pollution studies with children from the Northwest Asthma & Allergy Center, as it is known today. Koenig was adamant that air pollution standards needed to protect the most vulnerable—children and the elderly. In the 1980s and 1990s, Koenig and Pierson published findings showing air pollutants' deleterious effects on asthmatic children.

Their research became part of a growing body of evidence showing wood smoke was harmful to children. Their lung function was lower when air pollutants were higher. Wood smoke contains carbon monoxide, nitrogen oxides, sulfur oxides, aldehydes, polycyclic aromatic hydrocarbons, and fine respirable particulate matter, compounds shown in laboratory studies to cause harmful effects in humans.

With this evidence, Washington state legislation for burn bans was passed in 1989. The Puget Sound Clean Air Agency (PSCAA) calls a burn ban on days with particularly poor air quality and prohibits the use of wood stoves and fireplaces.

By the mid 1990s, scientific evidence convinced the EPA to propose more stringent standards on particulate matter (PM). Yet, questions about the underlying biological mechanisms remained. Congress directed the EPA to increase its funding on PM health effects research and the EPA, in turn, recommended a multi-year research program based at universities. Koenig directed the Northwest Center for Particulate Air Pollution and Health, one of five centers funded in the summer of 1999. The funding ended in 2006.

In 2000, Koenig published a primer on air pollution

# EMERITI



and health, *Health Effects of Ambient Air Pollution: How Safe is the Air We Breathe?* In addition, Koenig has testified and given scientific evidence to state agencies and has served on advisory committees for the PSCAA, the EPA Clean Air Science Advisory Committee, and the Mickey Leland National Urban Air Toxics Research Center.

## For more information

Northwest Center for Particulate Air Pollution and Health:

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

Jane Koenig's faculty page: [https://depts.washington.edu/envhlth/faculty.php?Koenig\\_Jane](https://depts.washington.edu/envhlth/faculty.php?Koenig_Jane)

## JIM WOODS

### LEADER IN METAL TOXICITY RESEARCH



After more than 40 years of investigating toxic metals in the environment, Jim Woods received research professor emeritus status in July, which he says “leaves the door open” to continuing his research.

Woods has led groundbreaking studies on mercury toxicity. Exposure to small amounts of mercury, a naturally occurring element, is relatively common and is abundant along the Pacific Rim. Large fish, such as swordfish, bluefin tuna, and mackerel often carry higher levels. Mercury is emitted from gold mining and coal-fired power plants, and is also used in compact fluorescent light bulbs and dental amalgam (silver) tooth fillings. Prolonged exposure to mercury increases the risk of adverse health effects, which can range from mild to severe, from tremors to impaired cognitive function.

Woods and colleagues found that adults with occupational exposure to mercury had significantly higher levels of metabolites called porphyrins in their urine. Higher porphyrin levels among dental professionals who worked with amalgam tooth fillings correlated with the severity of neurobehavioral deficits.

He also reported the first genetic polymorphism that makes mercury-exposed individuals more susceptible to damaging health consequences. Among other effects, mercury exposure impairs the production of neurotransmitters, which are responsible for brain functions. Individuals with impaired neurotransmitter function can be particularly sensitive to mercury exposure. Woods discovered that variations of the gene responsible for a critical enzyme can cause impaired heme—a substance required to promote proper neurotransmitter processing. Up to 25% of the American population could have genetic polymorphisms that lower the threshold for mercury toxicity, which suggests that a significant number of people may be adversely affected by exposure to mercury at levels much lower than those thought to be a public health concern.

In the 1990s, a scientific controversy over the safety of dental amalgam fillings in children unfolded. Woods collaborated with other researchers in an eight-year clinical trial that compared children with and without dental amalgam fillings with their performances on a wide variety of neurological function tests. Although that study did not evaluate particular genetic susceptibilities in the children, Woods' current research is focused on determining if genetic factors might increase the susceptibility of some children to the toxic effects of mercury, similar to the effects observed in adults with genetic polymorphisms.

Most recently, Woods has focused on autism, a developmental disorder that may affect 1 in 90 children in the United States. Currently, diagnosing autism is limited mainly to a series of psychological assessments. Woods is on the cusp of unveiling a potential biomarker for autism that may improve the diagnosis of this disorder. His recently published study found that nearly 20% of the autistic children studied had porphyrin levels that were significantly higher than normal children of the same age. Woods believes this biological test could eventually be added to a comprehensive evaluation of autism risk assessment.

## For more information

Jim Woods' faculty page: [http://depts.washington.edu/envhlth/faculty.php?Woods\\_James](http://depts.washington.edu/envhlth/faculty.php?Woods_James) ■

## research day



At our annual Student Research Day, one second-year master's student from each graduate program was selected to give a presentation. Summaries of their research are given below. Faculty preceptors are listed in parentheses. The remainder of the graduating master's students presented posters of their work. Thesis abstracts are online at [http://depts.washington.edu/envhlth/research\\_day/srd\\_10.php](http://depts.washington.edu/envhlth/research_day/srd_10.php)

### Chemical Exposure at Home

Alexander Domesle, MS, Environmental Health  
(John Kissel)

Several human population studies show a discrepancy between expected and actual exposure levels. The subjects' expected exposure to pesticides and other pollutants, calculated by conventional computer models, does not match the elevated levels of metabolites present in their urine. Domesle constructed an experimental chamber to test whether conventional models underestimate the amount of semi-volatile organic compounds (SVOC) absorbed through the skin under normal low-level conditions, similar to the environment found inside a home. He applied radioactively labeled SVOC to human cadaver skin and found the fraction absorbed through the skin under low-level conditions was considerably higher than past research suggests. These studies will lead to a better understanding of the dermal exposure route's contribution to whole body burden and more precise chemical exposure models.

### Combat Trauma Increases Tobacco Use

Matthew Chambers, MPH, Occupational & Environmental Medicine (Jordan Firestone)

Chambers analyzed Department of Defense survey data and found that combat trauma increases the likelihood for soldiers to start or continue using tobacco. To address the increasing rates of smoking in military personnel, seen since the start of the wars in Afghanistan and Iraq, Chambers suggests three strategies: eliminate price reductions for

tobacco at military establishments, expand tobacco bans to outdoor areas, and promote alternative stress-coping mechanisms such as routine physical activity. Based on this research, he also recommends that tobacco cessation services be integrated with other post-deployment health services.

### Toxicity of Quantum Dots

Tao Lin, MS, Toxicology (Terrance Kavanagh)

Quantum dots (Q-dots), with their bright, photostable, and size "tunable" fluorescence, have shown great promise as alternatives to organic dyes for biological imaging. Yet, a better understanding of potential adverse human health effects related to exposure to Q-dots is needed. Lin investigated characteristic immune system responses triggered by newly synthesized polymer-coated Q-dots introduced to mouse-cell cultures. Preliminary data from his studies as well as ongoing *in vivo* experiments suggest that even highly stable polymer-coated Q-dots are capable of inducing inflammatory responses, and therefore, confirm the need for increased regulatory scrutiny of nanomaterials in medical and other applications.

### Iodine Byproducts in Drinking Water

Miyoko Sasakura, MS, Exposure Sciences  
(Christopher Simpson and Gretchen Onstad)

The Environmental Protection Agency closely regulates byproducts produced by large-scale water treatment methods. Yet, byproducts produced by other methods are not regulated. For example, hikers, travelers, and military personnel



opposite page, l to r: Alexander Domesle, Matthew Chambers, Tao Lin, Miyoko Sasakura, Jessica Kocian

*Photos: Sarah Fish, Courtesy of Matthew Chambers, Elizabeth Sharpe*

commonly use iodine tablets to disinfect water when potable water is unavailable. Increasing evidence suggests that iodinated byproducts may be more toxic than currently regulated compounds. To investigate the potential level of human exposure, Sasakura added iodine tablets to water samples collected from Washington state rivers and reservoirs and found high levels of iodo-trihalomethanes. She recommends further studies to accurately assess human health risks.

### MRSA Risk at Pig Farms

Jessica Kocian, MPH, Environmental & Occupational Health (J. Scott Meschke)

Farms that confine large numbers of swine may harbor methicillin-resistant *Staphylococcus aureus* (MRSA), which has raised concern for worker safety. Kocian conducted a quantitative microbial risk assessment to determine swine workers' risk of becoming carriers of MRSA. She used computer modeling to characterize two potential routes of exposure: inhalation of airborne MRSA and contact with surfaces contaminated with MRSA. Her assessment predicted that swine workers are at high risk to become carriers, and she highlighted areas for further research. ■

l to r: 2010 graduates Kevin Do, Lani Gabriel, Ashley Barlund, Sarah Helgeson, Andy Leung, Regina Ma, Kelsi Thorsness, Alyssa Vivas, Mary Tseng, Wint Wai, Matt Wilson, Joanna Vong, Chantel Yanagawa, and Aster Zemenfeskidus. *Photo: Sarah Fish*

2009 – 2010

## degrees awarded

### Autumn 2009

Mehak Ahluwalia, BS  
William Callis, MPH  
Ling Cui, MS  
Aminta Dang, BS  
Danielle Hansen, BS  
Laurel Jennings, MS  
Kenneth Kuhn, MPH  
Judy Louie, BS  
Richard Neitzel, PhD  
Christina Rohlik, MS  
Luke Swart, BS

### Winter 2010

Emily Cane, BS  
Mark Crippen, BS

### Spring 2010

Ashley Barlund, BS  
Carolyn Bergstrom, MS  
Ryan Bible, MS  
Matthew Chambers, MPH  
Rachel Denney, BS  
Kevin Do, BS  
Jason Faulkenberry, MS  
Kellie Fay, PhD  
Rachel Fischer, MPH  
Sarah Helgeson, BS  
Margaret Hughes, MS  
Stephen Hyland, MPH  
Helen Iwasaki, BS  
Christine Kim, MS  
Jessica Kocian, MPH

Jennifer Krenz, MPH  
Andy Leung, BS  
Joseph Nelson, MS  
Thanh-Hien Ngo, BS  
Yuh-Chi Niou, MS  
Erin Peck, PhD  
Lorena Ray, BS  
Miyoko Sasakura, MS  
Sukriti Singhal, MPH  
Kelsi Thorsness, BS  
Nhu-Minh Nguyen Truong, BS  
Alyssa Vivas, BS  
Joanna Vong, BS  
Julie Wagner, MS  
Jill Walters, MS  
Lynn Wilder, PhD  
Stephanie Wong, MS  
Chantel Yanagawa, BS  
Aster Zemenfeskidus, BS

### Summer 2010

Alexander Domesle, MS  
Alain Flores, BS  
Kelly Jones, MS  
Heather Klintworth, PhD  
Jonathan Lesesne, MPH  
Tao Lin, MS  
Christine Loftus, MPH  
Regina Ma, BS  
Frew Meshesha, BS  
Eric Smith, MPH  
Mary Tseng, BS  
Eileen Wong, MS



## AIR POLLUTION & CARDIOVASCULAR DISEASE CONFERENCE

A symposium on air pollution and heart disease held June 21–22 at the University of Washington couldn't have been better timed. In May, the American Heart Association (AHA) released a scientific statement in AHA's journal, *Circulation*, reviewing new evidence that links air pollution, especially fine particulate matter (PM<sub>2.5</sub>), to heart attacks, strokes, and sudden cardiac arrest.

Less clear is how PM<sub>2.5</sub> triggers biological mechanisms that lead to precursors of heart disease, such as hypertension or atherosclerosis. These underlying mechanisms were the focus of the symposium that brought 142 people together, including the leading scientists on the topic, to exchange laboratory findings and discuss areas for ongoing and future research.

One avenue of exploration is receiving greater attention—that not all sources and kinds of particles in air pollution are equally toxic. Air pollution is currently regulated by the total amount of particles captured and weighed on a filter. “While it's right to try to lower all pollution levels, eventually it will be better to have particular targets,” explains Professor Joel Kaufman, conference chair, AHA scientific statement co-author, and director of the UW DISCOVER Center on Cardiovascular Disease and Traffic-Related Air Pollution. “It helps to understand the biological pathways so we can design interventions to eliminate the most toxic agents in air pollution and have the greatest public health benefit.”

In the Pacific Northwest, diesel- and gasoline-powered traffic contributes to much of the air pollution. The DISCOVER Center and the Multi-Ethnic Study of Atherosclerosis and Air Pollution (MESA Air), also directed by Kaufman, are investigating traffic-related pollution and cardiovascular health effects, including the effects of living very close to a major road. In the future, predicts Kaufman, findings from these studies may influence zoning laws, such as where schools, housing, and recreational areas are located in relation to highways.

The DISCOVER Center, in collaboration with the Northwest Center for Occupational Health & Safety, organized the conference. Funding was provided by the National Institute for Environmental Health Sciences and the US Environmental Protection Agency. ■

## OCCUPATIONAL HEALTH NURSING INSTITUTE

Nurses from the Pacific Northwest didn't have to go very far to take part in the Occupational Health Nursing Institute. Practitioners merely logged in to their computers.

The University of Washington (UW) has the only Occupational and Environmental Health Nursing (OEHN) program in the Northwest. To reach nurses across the region, OEHN and the Northwest Center for Occupational Health & Safety offered an innovative training through the Department of Technology Innovations in Education and Research. Five online modules and a live-streamed seminar on June 19 were delivered by our department and School of Nursing faculty. A pilot project, the training was primarily for nurses not trained in occupational health. Organizers will use the experience to assess pedagogical methods and technology in continuing education courses.

The online modules included an occupational health nursing overview, hazard recognition and control, occupational health screening, OSHA regulations, and workers' compensation basics.

Ten participants came to the UW for the day-long seminar, and five participated electronically.

For Julia Todd, an occupational health nurse in Oregon, the course helped clarify the importance of her work in occupational health. “I feel justified in my role in that what I do is valuable and as important to the health care industry as those providing direct patient care.”

Course funding was provided in part by the National Institute for Occupational Safety & Health.

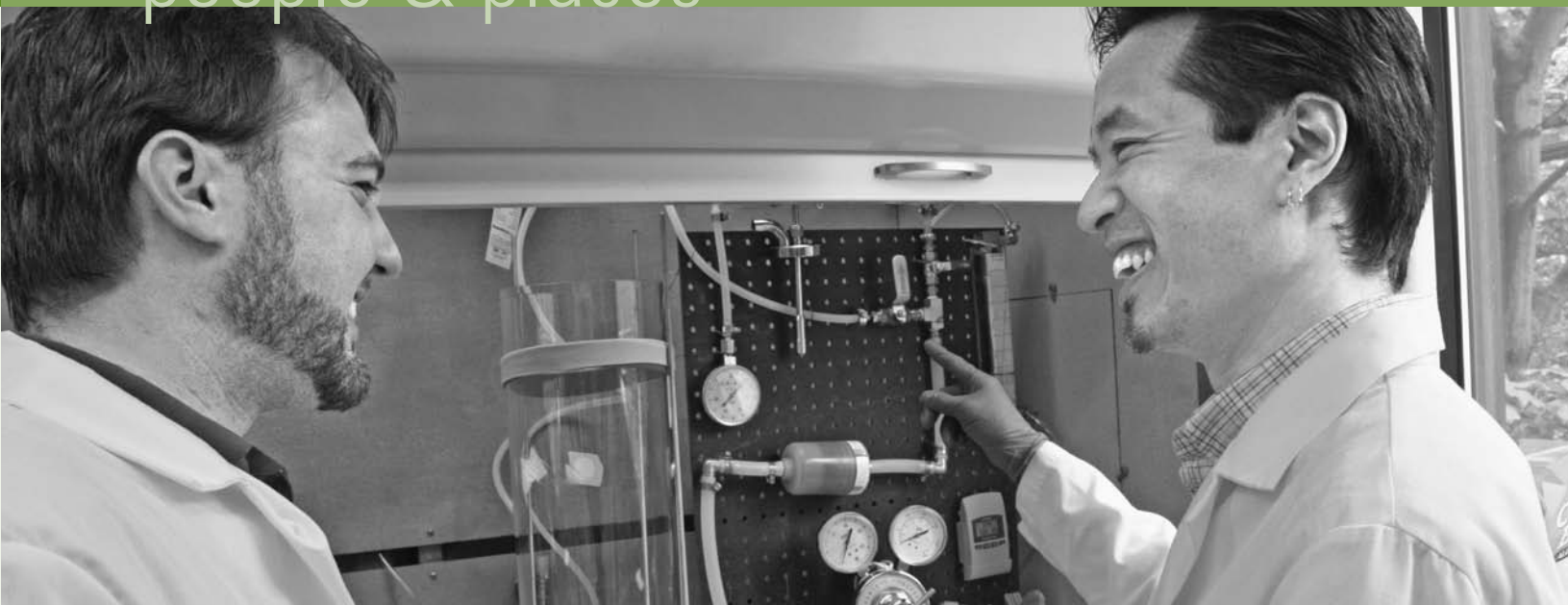
### For more information

Occupational and Environmental Health Nursing:

<http://www.son.washington.edu/admissions/apchsn/oehn/>

Northwest Center for Occupational Health & Safety: <http://depts.washington.edu/nwcohs/> ■





Jeffrey Shirai (right) and Alexander Domesle in the lab, conferring on an experimental chamber designed to test dermal exposure. Photo: Elizabeth Sharpe

Provost Phyllis Wise named **Howard Frumkin** the new dean of the School of Public Health, effective September 27, 2010. Frumkin will succeed Patricia Wahl, who is stepping down after 11 years as dean.

Assistant Professor **Gwy-Am Shin** received the American Water Works Association's Paper of the Year Award for the April 2009 article, "Demonstrating 4-log adenovirus inactivation in a medium-pressure ultraviolet disinfection reactor."

Professor **Lucio Costa** was elected to the Academy of Toxicological Sciences Board of Directors. He was also chosen to be a member of the European Center for Validation of Alternative Methodologies Scientific Advisory Committee.

Professor **David Eaton** was appointed chair of the Health Research Committee for the Health Effects Institute (HEI), a nonprofit corporation that provides high-quality, impartial, and relevant science on the health effects of air pollution. Professor **Lianne Sheppard** was appointed to the HEI Health Review Committee.

In April, Professor **Noah Seixas** and Research Coordinator **Carlos Dominguez** presented with the executive director of Casa Latina on their health and safety collaboration for day laborers at the National Action Summit for Latino Worker Health & Safety in Houston, Texas. Also in April, Research

Professor **James Woods** made a presentation on urinary porphyrin excretion in normal and autistic children to the Autism Society of Washington in Spokane.

In May, Postdoctoral Researcher **Sheryl Magzamen** was invited to the University of Wisconsin-Madison to present on community-based surveillance tools and health care use among children with asthma.

**J. Scott Meschke** was promoted to associate professor, effective July 1, and **Garbor Mezei** to affiliate associate professor, effective May 1.

**Steven Hecker**, director of the Continuing Education and Outreach program, distributed health and safety materials to students at the May 22 Seattle Youth Town Hall at the Seattle Center-based Vera Project. The meeting with Mayor Mike McGinn and four City Council members brought nearly 150 young adults together to discuss issues affecting them.

In July, Affiliate Professor **Steven Gilbert** co-coordinated the Toxicology History Room at the International Congress of Toxicology in Barcelona, Spain.

This summer, Senior Lecturer **Chuck Treser** completed his four-year appointment as an external examiner for the Environmental Health undergraduate program at the Dublin Institute of Technology, the only one in the Republic of Ireland.

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**Jonathan Sharpe**, outreach and education manager for the Center for Ecogenetics and Environmental Health (CEEH), was nominated for a UW Distinguished Staff Award.

DEOHS alumni spoke with students at the undergraduate student Career Day last February and at the graduate student Career Day in May. **Rafael Ponce** (PhD, Toxicology, 1995) is at Amgen. **Breyan Paske** (BS, 2008) and **Oleg Antonchuk** (MS, Industrial Hygiene, 2008) work for Boeing. **Martin Rose** (MS, Industrial Hygiene & Safety, 1996) runs his own company, Rose Environmental. **Calvin Terada** (BS, 1994) and **Marc Stifelman** (MS, Toxicology, 1998) are at the US Environmental Protection Agency Region 10. **Katherine (Himes) Strange** (MS, Environmental Health, 2003) works for the Puget Sound Clean Air Agency.

In April, Graduate Student Services Manager **Rory Murphy** was appointed the School of Public Health representative to the Graduate Opportunities & Minority Achievement Program Advisory Board. In May, Murphy and Undergraduate Program Manager **Susan Inman** joined the Health Sciences Center Minority Students Program Advisory Board.

**Chrissie Chang** replaced **Monica Leibrant** as the coordinator of the department's Graduate Program Services.

Senior Fellow **Wesley Smith** (CEEH) and Program Manager **Katie Frevert** (Superfund Research Program) helped organize and participated in the Duwamish Community Environmental Health Fair on June 5 in Seattle. Over 140 people attended the event, which targeted families living in the South Park and Georgetown neighborhoods and which aimed to teach how the cleanup and restoration planning of the area will impact human health and the environment.

**Geralyn "Lynn" Fritzen**, a budget and fiscal analyst in the department since 1992, retired this year. She managed grant funding for several research laboratories.

**Vanessa Galaviz** (PhD candidate, Environmental and Occupational Hygiene) was awarded a \$2000 scholarship from the San Diego chapter of MANA, A National Latina Organization.

Master's degree student **Stephanie Chan** (Exposure Sciences) will attend a summer training program at the University of California at San Francisco for minority students interested in pursuing doctoral programs in cancer research.

In May, **Rachel Fischer** (senior fellow trainee, Occupational and Environmental Medicine) presented her research on women textile employees in Shanghai, China, and the association between shift work and endometrial and ovarian cancer at the American College of Occupational and Environmental Medicine Conference in Orlando, Florida.

Six undergraduates presented at the UW Annual Undergraduate Research Symposium on May 21. **Kendra Broadwater**, Assessing data reliability by comparing performance on BARS and BARSp; **Lani Gabriel**, Use of urinary biomarkers to assess woodsmoke exposure in wild-land firefighters; **Andy Leung**, Wood smoke air monitoring in the Seattle-Tacoma area; **Abbi McClintic**, Intense focused ultrasound (IFU) for localizing of deep painful tissue; **Tiana Nizamic**, Heart disease from traffic-related air pollution: Studying the link between diesel exhaust exposure and cardiovascular disease through inflammatory cytokine levels (IL-6); and **Alyssa Vivas**, Adverse perinatal outcomes associated with placental abruption among Peruvian women. Details at <https://expo.uw.edu/expo/apply/189/proceedings>.

## DEOHS Graduation Ceremony

The department's graduation and reception were held on June 13. **Dennis McLerran**, who heads the Environmental Protection Agency Region 10, was the keynote speaker. **Alexander Domesle** and **Julie Wagner** were the graduate program speakers, and **Andy Leung** was the undergraduate speaker. Photos at <http://tinyurl.com/DEOHSGradPhotos> ■

I to r: 2010 Exposure Sciences graduates Yuh-Chi Niou, Ryan Bible, Margaret Hughes, Miyoko Sasakura, Julie Wagner, Stephanie Wong, Jill Walters, and Professor Michael Yost. Photo: Sarah Fish





## FACULTY MEMBERS in memoriam

*by Charles Treser and Jack Hatlen*

**Foppe de Walle**, an affiliate professor in Environmental Health, died on April 23. He was 65 years old.

He completed his undergraduate and master's degrees in engineering in the Netherlands and received his PhD in Environmental Engineering from the University of Washington in 1973. In 1977, he joined the faculty in our department. His research focused on toxic substances and biological agents in drinking water, wastewater effluent, and solid and hazardous waste leachate. He authored books on environmental health and helped develop protocols for analyzing polycyclic aromatic hydrocarbons found in sediment in Puget Sound.

In 1983, de Walle accepted a position in the Netherlands as director of the TNO Research Institute for Environmental Hygiene. Yet, he maintained his UW faculty position and returned each summer to teach and continue his research.

In 2002, de Walle was part of a team whose proposal won first place out of more than 2500 environmental and energy projects submitted to the European Commission. The team developed an innovative dry cleaning method that replaces the toxic chemical perchloroethylene with carbon dioxide. In 2006, the technology received the prestigious "Nordic Swan," an official ecolabel for Nordic countries. Then in 2009, a project led by de Walle was selected by the Eco-Innovation Initiative, which is part of the European Union's Competitiveness & Innovation Programme. The project—a prototype for an improved electronic waste facility—uses smart technology and improved recovery techniques to recycle waste from electrical and electronic equipment.

**Goldy Kleinman**, a lecturer emeritus who joined the department in 1971, died on June 17. She was 88 years old. Kleinman was instrumental in helping the Washington State Department of Labor & Industries develop an occupational disease and injury record-keeping system to better prevent workplace illnesses and fatalities.

**John Milner**, an associate professor and occupational medicine physician who helped create our occupational medicine program, died on February 24. He was 79 years old. He researched skin diseases related to occupational and environmental irritants and allergens. He also held a clinical position at the Everett Clinic, where he worked for 18 years.

**Stanley Pier**, an affiliate associate professor in the department since 1986, died on April 20. He was 83 years old. Pier was an environmental toxicologist and faculty member at the University of Texas Health Science Center at Houston for nearly 20 years. ■



Foppe de Walle established the department's analytical laboratory, which was equipped with gas chromatographs and a mass spectrometer, shown next to him in the 1980 photograph above.

*Photo: Courtesy of the School of Public Health*





SCHOOL OF PUBLIC HEALTH  
UNIVERSITY of WASHINGTON

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Seattle, Washington 98195-7234

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## AWARD WINNERS congratulations

**Alexander Domesle**, a master's degree student in Environmental Health, received the department's Outstanding Graduate Student Award.

**Alyssa Vivas** received the department's Outstanding Undergraduate Student Award.

**Jeffrey Shirai**, a research scientist in Professor **John Kissel's** laboratory, won the department's 2010 Distinguished Staff Award. Other nominees were **Jacqui Ahmad, Nicola Beck, Dianne Botta, Mike Espinoza, Kit Galvin, Marcy Harrington, Brian High, Jim Hogan, Stacey Holland, Susan Inman, Lisa McConnachie, Elliot Norwood, Venetia Runnion, Alison Scherer, Cathy Schwartz, Maria Tchong-French, Collin White, Jianbo Yu, and Megan Zadworny.**

Professor **Michael Yost** received the 2010 Outstanding Faculty Mentor Award from the department's Student Advisory Committee.

Details on the award winners at <http://tinyurl.com/DEOHSawards> ■

## THE FINE print

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*Environmental Health News* is published three times a year by the Department of Environmental and Occupational Health Sciences at the University of Washington. Inquiries should be addressed to:

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ISSN number 1548-1875

Printed by Johnson-Cox Company on  
100% post-consumer waste recycled paper  
with vegetable-based inks.

