Department of Environmental and Occupational Health Sciences
# Environmental Health News
School of Public Health and Community Medicine ■ University of Washington ■ Spring–Summer 2005

## Inside



# A Many-Faceted Department

*This issue of Environmental Health News describes safety training in the far reaches of Alaska, explores the ethical consequences of genetic research, and highlights the research of our students, staff, and faculty. It is the end of the school year, and we celebrate the accomplishments of our graduates. We list the more than 50 presentations given at conferences this spring, demonstrating the depth and breadth of our research.*

## Training on the Edge—in Alaska

Survival is hard but some choices are easy at the far edge of the continent.

Continuing education trainer Chuck Mitchell understood the priorities when a Yupik whaler ran into his classroom and yelled, "We have a strike!"

To subsistence hunters of Alaska, the first bowhead whale of the season is indeed a priority. As they headed for the Bering Sea in their walrus-skin boats, Mitchell's hazardous waste operations class suddenly shrank from ten students to four.

Mitchell said it was the first time he had watched a class disappear in 18 years of training. He was teaching the class under a National Institute of Environmental Health Sciences (NIEHS) grant for "underserved" Native American populations in a four-state region that includes Alaska.

Residents of the impoverished towns of Gambell and Savoonga needed to take the 40-hour "HAZWOPER" course to qualify for paying jobs in the cleanup of a former military site on St. Lawrence Island. The Yupik people, who rely on marine mammals and groundwater for food and water, have been found to have body levels of polychlorinated biphenyl (PCB) about five times higher than other Americans.

Mitchell's classes were held upstairs in city hall, so he met most of Savoonga's residents. One of his biggest rewards was to experience the rising self-esteem of a young man who said he'd never passed a test in school.

*—continued on page 11*

Chuck Mitchell

*Snowmobiles and four-wheelers are the only transportation on St. Lawrence Island–except dog sleds. Here, the class wears "Level C" suits for hazardous waste cleanup.*

# GENETICS & ETHICS

Decoding the human genome has "allowed us, for the first time, to read our own instruction book," Dr. Francis Collins told a crowd of about 300 at *DNA, Health, and Social Justice,* a community forum at the University of Washington May 21, co-sponsored by the Department of Environmental and Occupational Health Sciences.

Yet, he cautioned, we may want to be careful about how far we read those instructions. Genomic medicine is the next major breakthrough in the diagnosis, prevention, and care of disease, "but genomic medicine carries other baggage."

"If I told you I could swab a few cells from your cheek and tell you your genetic glitches (your risk for various diseases), would you do it?" he asked. If the genetic test predicted a risk for Alzheimer's disease, which can't be cured, it would be unsettling information, but if the test predicted a preventable disease, it would be reassuring.

For example, a genetic screening test can predict a type of early-onset colon cancer. People who carry the mutation could start having yearly colonoscopies at age 35. Yet even after those people have reduced their risk of getting cancer, they could face discrimination from employers or insurers. "Your employer might not think you are a good candidate for a promotion," Dr. Collins said.

Chetana Archaya

*Pat Kuszler, UW Law School, and Wylie Burke, UW Center for Genomics and Healthcare Equality, talk with Pat and Sharon Terry (President) of the Genetic Alliance.*

## COMMUNITY FORUMS

Those types of ethical, legal, and social problems were why Dr. Collins, director of the National Human Genome Research Institute, brought his staff to Seattle to hear the concerns of the community and discuss the implications of genomic research. His community forums have previously been held in Washington, DC, and he said he wanted to "take it on the road and see what people are wrestling with every day." He said he hopes to make the forum an annual event in different cities.

NHGRI

*Dr. Francis Collins*

He heard questions and comments about privacy issues, racial discrimination in genetic counseling, unequal access to health care advances, ownership of a person's genetic material, the use of DNA evidence in the criminal justice system, and genetics and ancestry.

"We don't want to stop the progress of genetic research, but we want to make sure it reaches everyone and protects our communities," said Ralph Forquera, executive director of the Seattle Indian Health Board, a forum participant.

## GENETIC MANIPULATION

One student asked, "where do you draw the line?" in making therapeutic advances.

People have long engaged in biological enhancements, whether vaccinations to boost the immune system, weight-lifting, or piano lessons, Dr. Collins responded, yet "it makes people uneasy when we mess with genetics, especially when it's something that might be passed along" to future generations.

Even if science advanced to the point where "designer babies" could be selected for genetic traits such as athletic or musical talent, environmental factors play a role in how that trait is expressed. "You might end up with a kid with his door locked, listening to heavy metal music and smoking marijuana," Dr. Collins said.

Almost all medical conditions, except some forms of trauma, have both genetic and environmental compo-

nents, he said. Some—like sickle cell trait—are mostly genetic, while others—like AIDS—are mostly environmental, though some people seem to be protected by their genetic make-up. He cautioned people not to "neglect the role of the environment or undervalue the power of the human spirit" by focusing too heavily on the genetic component of disease.

Knowledge of human variation could potentially reduce prejudice and health disparities, but it also might be used to increase them. And, Dr. Collins said, the benefits of genetic advances might be made widely available to society, or available only to a privileged few.

Health care providers, policy makers, and the public need to become more genetically literate, and catch up with commercial advances. "Target [department store] is selling a DNA storage and profile kit," he said, "but what are we going to do with that information?"

The retail sector in genetics has its place, said Rick Carlson, senior advisor in the UW Resource Center for Health Policy. With a commercial genetic test kit, "you own the results, not your employer," as could be the case with being tested at the doctor's office. "You may trust your employer or your insurer, but despite our best efforts, the data may escape anyway."

If legislation, such as the pending federal Genetic Information Nondiscrimination Act of 2005, is passed, "it would set up a mechanism, but, in reality, issues always seem to be sorted out less formally," Carlson said.

Makani Themba-Nixon, executive director of the Praxis Project, which focuses on health equity and justice, cautioned about an overreliance on the private sector, which focuses on "market—not social—concerns." She urged that genetic information be "delinked from profit...We know in our gut that someone should not own our grandmother's genetic information."

Sharon Terry, president of the Genetic Alliance, a consortium of 600 disease advocacy groups, talked about the first lay-owned blood and tissue bank, Biobank. She said better scientific advances could be made through a "participant" rather than a "research" culture driven by science and funding imperatives. She co-owns the patent to the psuedxanthoma elasticum (PXE) gene, expressed in a genetic disease that affects both of her children.

The National Human Genome Research Institute has "the largest research program in bioethics in the history of the planet," Dr. Collins said, but many questions remain unresolved. He encouraged forum participants to become ambassadors for ethically responsible advances in genetic sciences.

Courtesy of Chetana Archaya

*Chetana Archaya (center), manager of the Community Outreach and Education Program, greets participants.*

The Community Genetics Forum was a collaboration among the National Human Genome Research Institute and several University of Washington partners. The Community Outreach and Education Program of our Center for Ecogenetics and Environmental Health, along with the UW Center for Genomics and Healthcare Equality, was responsible for planning and community involvement. The UW Department of Genome Sciences coordinated the participation of high school teachers and students. Northwest Association for Biomedical Research recruited students from Biotech Expo to display their work. Other key UW partners included the Law School, the Department of Medical History and Ethics, the Institute for Public Health Genetics, and the Center for Genomics and Public Health.

Dr. Collins' visit also included a special session for UW students the day before the public forum and student poster presentations. Science teachers from around the state brought high school students with them for the day.

*—Dr. Collins led the team that decoded the human genome sequence. Before moving to the National Institutes of Health in 1993, he was on the faculty at the University of Michigan. His research has led to the identification of genes responsible for cystic fibrosis, neurofibromatosis, Huntington's disease, and Hutchison-Gilford progeria syndrome.*

# CONFERENCE PRESENTATIONS

*departmental presenters in bold green type*

## Oregon Governor's Occupational Safety & Health Conference
### *March 2, Portland*

**Croteau G, Flanagan ME.** Silica in construction: Exposure assessment and control

**Gleason R.** Respiratory hazards and respiratory protection

## Society of Toxicology
### *March 6–10, New Orleans*

The DEOHS Toxicology program was well represented at this year's annual Society of Toxicology meeting. Professor **Elaine Faustman** serves on the SOT Council. Professor **Dave Eaton** organized and moderated a panel discussion on reorganization of NIH study sections and funding of toxicology grants. Affiliate Associate Professor **Steve Gilbert** organized the alumni reception. Graduate student **Heather Klintworth** received a travel award for the conference.

**Bekris L,** Janer M, **Kavanagh T,** Lernmark A. The glutamate cysteine ligase catalytic subunit -129 C/T single nucleotide polymorphism is associated with the level of GAD65 auto-antibodies in Type 1 diabetes patients with a delayed age-at-onset

**Cole T, Walter B,** Shih D, Tward A, Lusis A, **Costa L,** Furlong C. Toxicity of chlorpyrifos and chlorpyrifos oxon in a transgenic mouse model of the human paraoxonase (PON1) Q192R polymorphism

**Echeverria D, Woods J,** Heyer N, **Farin F,** Bittner A, **Li T,** Garabedian C. Associations between mercury, BDNF polymorphism, and attentional attributes of motor function

**Ellis M, Polk W, Kushleika J, Simmonds P, Woods J.** RhoA/ROCK signaling negatively regulates nuclear factor kappa B (NF-B) activation via modulation of IB levels in kidney epithelial cells

**Faustman E, Yu X, Sidhu J, Robinson J.** Toxicant affects on ubiquitin-proteosome systems: Lessons from cross-compound and cross-system assessments

**Gohlke J, Griffith W, Faustman E.** Computational models for the acquisition of neocortical neurons in the developing human, monkey, and mouse: Cross species comparison of toxicodynamics

**Griffith W, Vigoren E, Faustman E.** Quantitative models of bystander effects from ionizing radiation in non-targeted cells

**Gross-Steinmeyer K, Stapelton P, Liu F, Tracy J, Bammler T,** Strom S, **Eaton D.** Altered transcriptional regulation of genes involved in aflatoxin genotoxicity by sulforaphane (SFN) and diindolylmethane (DIM)

**Guizzetti M, Pathak S, Giordano G, Costa L.** Effect of organophosphorus insecticides and their metabolites on DNA synthesis in astroglial cells

Ho H, **White C, Fernandez C,** Fausto N, **Kavanagh T,** Nelson S, Bruschi S. Nrf2 activation involves an oxidative-stress independent pathway in tetrafluoroethylcysteine-induced cytotoxicity

**Klintworth H, Xia Z.** Signaling pathways of paraquat-induced apoptosis: A model for Parkinson's disease

**McConnachie L, Fernandez C, Mohar I,** Pierce R, **Kavanagh T.** Acetaminophen induced hepatoxicity in a GCLM- null mouse model

**Mohar I, McConnachie L, Fernandez C, Kavanagh T.** Effect of acetaminophen on cytosolic and mitochondrial glutathione in the livers of wild-type, GCLM-heterozygous, and GCLM-null mice

**Moneypenny C, Stapleton P, Gallagher E.** Effects of etoposide on human fetal hematopoietic stem cells

Pettan-Brewer C, **Cole T, Fisher J, Walter B, Forbes A,** Yee N, **Costa L,** Furlong C. PON1 modulates OP toxicity during development

**Polk W, Kushleika J, Ellis M, Simmonds P, Woods J.** Protein kinase C mediates LPS activation of nuclear factor kappa B (NF-B) in kidney epithelial cells

Prophete C, Maciejczyk P, Salnikow K, **Gould T, Larson T,** Jaques P, **Koenig J,** Sioutas C, Lippmann M, Cohen M. Effects of PM-associated metals on macrophage iNOS and ERK: A role in altered iron homeostasis?

**Robinson J, Yu X, Sidhu J, Hong S, Kim E, Faustman E.** Examination of metal-induced cell cycle alterations and apoptosis in C57BL/6 and SWV mouse embryonic fibroblasts

Robison S, Needham L, **Faustman E,** Zenick H, Sheldon L. Integration of biomonitoring data into the risk assessment process

**Shi S, Botta D, Bammler T, Beyer R, Kavanagh T.** Prediction of transcription factors commonly affected by glutamate-cysteine ligase expression in mice exposed to acetaminophen, carbon tetrachloride or tumor necrosis factor

**Wang Y, Liu L, Xia Z.** ERK1/2-RSK2 stimulation of MEF2C transcription promotes cortical neuron survival

**Yu X, Sidhu J, Robinson J, Hong S, Faustman E.** Integrative analysis of genome-wide gene expression and pathway mapping in mouse embryonic fibroblast (MEF) exposed to cadmium, arsenic and methylmercury: Induction of oxidative stress, disruption of ubiquitin-proteasome system and cell cycle regulation

## Workplace Health & Safety in the Global Economy
*April 29–30, Eugene*

**Gleason R.** Construction and general industry training in Costa Rica and Nicaragua

## Society for Technical Communication
*May 8–11, Seattle*

**Freeman, K.** 28,100,000 hits for "diabetes" or how e-health consumers navigate millions of web pages to find information they trust

**Hall KJ, Freeman KS,** Stewart CS, **Younglove L.** Communicating risk: Overcoming apathy, denial, and other barriers

Sternberg GH, Barkley D, **Hall KJ,** Wilk T, Yelverton B. Careers in environmental technical communication

## National Toxicology Program, National Academy of Sciences
*May 11, Washington, DC*

**Eaton D.** Functional genomics and public health decisions

**Faustman E.** Systems biology in public health decisions

## American Thoracic Society
*May 20–25, San Diego*

**Carlsten C,** De Roos AJ, **Kaufman J, Checkoway H, Seixas N.** Cell markers and cytokines in cement masons: Associations between silica dust exposure, inflammation and immunity

**Corey LM, Baker C, Luchtel DL.** Genomic response of the ApoE-/- mouse to Seattle PM

**Dale EM, Mar TF, Jansen K, Koenig JQ, Larson TV.** Effect of $PM_{2.5}$ on exhaled nitric oxide: A HEPA intervention field study

**Karr CJ,** Peden DB, Ritz B. Impact of prenatal and early infancy environmental exposures on infant health

**Luchtel DL, Corey LM, Baker C.** Serum cytokine levels in the ApoE-/- mouse following exposure to Seattle PM

**Luchtel DL, Corey LM, Baker C.** Heart rate variability in the ApoE-/- mouse following exposure to diesel exhaust

**Peretz A,** Sullivan JH, **Trenga C, Shepherd K,** Mieras J, **Kaufman J.** A pilot study of the effect of diesel exhaust on exhaled NO measures in healthy adults

**Shusterman D,** Tarun A, Murphy M-A, Morris J. Seasonal allergic rhinitic and normal subjects congest differentially to nasal provocation with acetic acid vapor

**Sumner A,** Thornquist M, **Checkoway H,** Balmes J, **Takaro TK.** Glutathione S-Transferase Mu 1 polymorphism and asbestos-related lung disease

**Trenga CA,** Sullivan JH, Hubbard R, Jarvis SS, **Curtiss HM, Sands FN, Gould T, Stewart J, Shepherd K, Larson TV, Kaufman JD.** Results from a pilot study of diesel exhaust exposure health effects in humans

**Vedal S,** Dutton S. Wildfire air pollution and daily mortality in a large urban area

## American Industrial Hygiene Conference
*May 21–26, Anaheim*

**Scott MacKay** organized an exhibition booth and social event for the department. **Lee Monteith** taught in a professional development course on current direct reading technology for emergency response and **Mike Morgan** taught a course on case studies in biological monitoring. Monteith and Morgan also served as session monitors. PhD candidate **Stephanie Carter** taught in a professional development workshop and arranged a roundtable session, both on welding health and safety.

**Croteau G.** Controlled and field assessment of LEV for concrete grinding

**Croteau G.** The theory and practice of using enclosures for controlling noise

**Flanagan M.** Wood floor refinishing–exposure and controls

**Gleason R.** Third party liability in construction safety and health

**Johns D, Morgan M, Daniell W, Kalman D, Shen D.** The effect of ethanol consumption on the rate of biotransformation of 1,1,1-trichloroethane

**Morris-Fine K, Hollenbeck R.** Toxicology evaluations: A streamlined process

**Seixas N, Goldman B, Sheppard L, Neitzel R, Norton S, Kujawa S.** Prospective noise induced changes to hearing among construction industry apprentices

## Alaska Primary Care Association Conference
*May 24–25, Anchorage*

**Murphy H.** How to develop outreach materials for low literate populations

## International Communication Association
*May 26–30, New York City*

**Hall KJ,** Clark FJ. Content analysis as a public health research tool

# STUDENT RESEARCH DAY, MAY 19, 2005

*In a seminar session, one second-year master's student from each of the academic programs was selected to present an oral summary of his or her thesis research. The remainder of the graduating master's students and selected PhD students presented posters of their work. Thesis abstracts are online at http://depts.washington.edu/envhlth/news/researchday05.html. Faculty preceptors are listed in parentheses.*

## DISINFECTION OF PATHOGENS

**Kristin Cunningham, MS, Environmental Health (*Scott Meschke*)**

Pathogenic microorganisms can be spread through water, food, or inanimate surfaces, and by person-to-person contact. This study examines the effectiveness of a newly developed disinfectant in killing two bacteria, methycillin-resistant *Staphylococcus aureus* and vancomycin-resistant *Enterococci*, and two viruses, poliovirus and feline calicivirus. Cryocide™, a liquid solution containing primarily chlorine dioxide, was sprayed on various surfaces (stainless steel, glass, tile, carpet, and cloth) that had been contaminated with the bacteria and viruses. After an hour, organisms were recovered from the surfaces and assayed to determine the extent of inactivation. Results showed that Cryocide™ spray is an effective disinfectant for many microorganisms, offering better disinfection of bacteria than viruses and better disinfection on hard surfaces than soft.

## FALL PROTECTION IN AIRCRAFT MAINTENANCE

**Michael Harris, MS, Industrial Hygiene and Safety (*Noah Seixas*)**

Aircraft maintenance involves standing on elevated, curved surfaces, which makes falls a major concern. We studied two companies to find out what types of equipment and fall protection are used, and we surveyed employees about experience, knowledge, and attitudes. Observational data showed a marked difference between the two companies in their level of OSHA compliance. Ladders weren't properly used at either company. It was difficult to draw firm conclusions, as the two companies used different types of equipment and had different layouts, suggesting a need for further study.

## PESTICIDES & PARKINSON'S DISEASE

**Heather M. Klintworth, MS, Toxicology (*Zhengui Xia*)**

Parkinson's disease is the second most common age-related neurodegenerative disorder, and its causes and mechanisms are still unknown. Epidemiological studies suggest a greater risk with pesticide exposure. Paraquat is an herbicide of particular interest because of its structural similarities with MPTP, a known neurotoxicant that produces Parkinson-like symptoms. This study used PC12 cells, a rat dopaminergic cell line, to study mechanisms of cell death. We found a dose-response relationship. These findings suggested that paraquat may be an environmental health concern and identified a nerve pathway that may play an important role in the mechanisms of dopaminergic cell death in Parkinson's disease.

## RISKS OF AGRICULTURAL WORK

**Jennifer Crowe, MPH, Environmental and Occupational Health (*Matthew Keifer*)**

The Hispanic farmworker population in the Yakima Valley is disproportionately at risk for various environmental and occupational health problems. This study is part of a community-based participatory research project called *El Proyecto Bienestar*, involving the University of Washington, Radio KDNA, the Yakima Valley Farmworker Clinics, and Heritage University. We interviewed founding members of the project and found a wide range of health and safety concerns, many of which centered around a common theme of family. We concluded that further research and interventions of *El Proyecto Bienestar* should incorporate families and children into the framework of farmworker health.

## LUMBAR FUSION OUTCOME

**Sham Juratli, MPH, Occupational and Environmental Medicine (*Gary Franklin*)**

Back pain is costly to workers and employers. This study examined the effectiveness of lumbar fusion, a surgery commonly used to treat chronic low back pain. We studied the records of all injured workers in the Washington state workers' compensation system who underwent lumbar fusion between 1994 and 2001. We wanted to see if the lumbar fusion rate dropped after the Food and Drug Administration approved a new device, the intervertebral cage, in 1996. We also looked at disability status two years after surgery, postoperative complications, and the rate of repeat surgery. Data analysis is continuing.

## STUDENT POSTER SESSION

***Environmental Health, MS***

**Heather Barr** *(Matt Keifer)* Characterizing the performance of the 'smart' tripod orchard ladder

**Elizabeth Spalt** *(John Kissel)* Critical review of experimental investigations of dermal absorption of chemical contaminants from soil and sediment

**Karen Takatani** *(Scott Meschke)* Survival of bacteria and virus in a residential water system

***Industrial Hygiene, MS***

**Bryan Berna** *(Noah Seixas)* Noise exposures aboard oceanic fishing vessels

**Amber Govert** *(Chris Simpson)* Determination of 3-nitrotyrosine as a biomarker for oxidative stress induced by exposure to diesel exhaust

**David Klavens** *(Chris Simpson)* HPLC analysis of 1-nitropyrene as a method for the measurement of diesel particulate matter

**Yi-Nien Lin** *(Pete Johnson)* The effects of high frequency stimulation on fatigue and twitch potentiation

***Safety and Ergonomics, MS***

Janet Blackstone *(Pete Johnson)* Physical exposure differences between children and adults on standard computer input devices

***Toxicology, MS***

Jing Chen *(Lucio Costa)* The effect of ethanol on the synthesis and efflux of cholesterol in astrocytes

Kyung-Hoon "Kei" Kim *(Christopher Kemp)* Identification of chromosomal aberrations in DMBA/TPA-induced skin tumorigenesis in p53 and p19 knockout mice using microarray-based comparative genome hybridization

Betsy Walter *(Lucio Costa)* Acute organophosphorus toxicity in developing hPON1-Q192R transgenic mice

***Environmental and Occupational Health, MPH***

**Heidi Curtiss** *(Joel Kaufman)* Diesel traffic and black carbon measurements in the Seattle metropolitan area

**Emily Duffield** *(Scott Meschke)* A modified method for viral and bacterial detection in oysters

**Fiona Sands** *(Joel Kaufman)* The effects of exposure to diesel exhaust on endothelial function as measured by brachial artery reactivity

***Occupational and Environmental Medicine, MPH***

**Stephen Hunt** *(Tim Takaro)* Long-term health consequences of incarceration as a prisoner of war

**Christine Scott** *(Matt Keifer)* Survival of the fittest: Does performance on a pre-employment fitness test predict injury in Army job training?

**Susan Sheldon** *(Bill Daniell)* Impact and policy implications of reproductive toxicological information on potential and actual methyl mercury exposure

***Environmental and Occupational Hygiene, PhD***

**Doug Johns** *(Mike Morgan)* The effect of ethanol consumption on the biotransformation of 1,1,1-trichloroethane in human volunteers

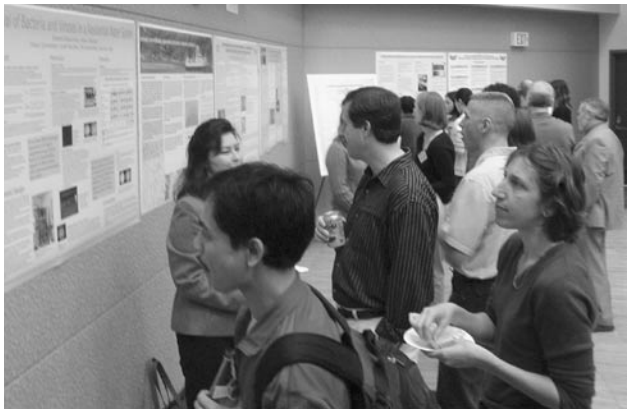
**Wayne Turnberg** *(Bill Daniell)* Preventing respiratory infections among healthcare workers in primary, urgent and emergency care settings

***Toxicology, PhD***

**Isaac Mohar** *(Terry Kavanagh)* Effect of acetaminophen on cytosolic and mitochondrial glutathione in the livers of wild-type, GCLM-heterozygous, and GCLM-null mice

**Bill Polk** *(Jim Woods)* Protein kinase C zeta mediates LPS activation of Nuclear Factor kappa B (NF-kB) in kidney epithelial cells

**Yupeng Wang** *(Zhengui Xia)* ERK1/2-RSK2 stimulation of MEF2C transcription promotes cortical neuron survival



*Tasbna Lehman*

*Students describe their thesis research at the poster session.*


# 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/ehce. Courses are in Seattle unless noted.*

## OSHA TRAINING INSTITUTE EDUCATION CENTER

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

| | |
|---|---|
| **Jul 18** | 10-Hour Construction Safety Standards (*Boise*) |
| **Jul 18–20** | OSHA 502: Construction Trainer Update (*Portland*) |
| **Jul 18–21** | OSHA 3095: Electrical Standards |
| **Jul 19–20** | OSHA 7600: 16-Hour Disaster Site Worker (*Boise*) |
| **Jul 20–22** | OSHA 503: General Industry Trainer Update (*Portland*) |
| **Jul 25–28** | OSHA 510: OSHA Standards for Construction |
| **Aug 1–3** | OSHA 2250: Principles of Ergonomics |
| **Aug 2–4** | OSHA 2264: Permit-Required Confined Space Entry (*Anchorage*) |
| **Aug 2–5** | OSHA 511: General Industry Standards (*Richland*) |
| **Aug 8–11** | OSHA 500: Trainer Course for Construction Industry |
| **Aug 9–12** | OSHA 501: Trainer Course for General Industry (*Portland*) |
| **Aug 15–16** | OSHA 7600: 16-Hour Disaster Site Worker (*Richland*) |
| **Aug 22–25** | OSHA 3110: Fall Arrest Systems (*Portland*) |
| **Aug 29–Sep 1** | OSHA 521: OSHA Guide to Industrial Hygiene |
| **Aug 30–Sep 2** | OSHA 510: OSHA Standards for Construction (*Boise*) |
| **Sep 7–9** | Supervisory Safety and Health Duties |
| **Sep 11–18** | OSHA 500: Trainer Course for Construction Industry (*Alaska cruise*) |
| **Sep 12–15** | OSHA 501: Trainer Course for General Industry |
| **Sep 12–14** | OSHA 2225: Respiratory Protect (*Portland*) |
| **Sep 19–21** | OSHA 503: General Industry Trainer Update |
| **Sep 19–22** | OSHA 511: General Industry Standards (*Portland*) |
| **Sep 21–23** | OSHA 502: Construction Trainer Update |
| **Sep 26–29** | OSHA 5600: Disaster Site Worker Train-the-Trainer |
| **Oct 3–6** | OSHA 510: OSHA Standards for Construction (*Portland*) |
| **Oct 3–6** | OSHA 6000: Collateral Duty for Other Federal Agencies |
| **Oct 10–13** | OSHA 3010: Excavation, Trenching, and Soil Mechanics |
| **Oct 10–13** | OSHA 521: OSHA Guide to Industrial Hygiene (*Portland*) |
| **Oct 3–6** | OSHA 510: OSHA Standards for Construction (*Portland*) |
| **Oct 3–6** | OSHA 6000: Collateral Duty for Other Federal Agencies |
| **Oct 10–13** | OSHA 3010: Excavation, Trenching, and Soil Mechanics |
| **Oct 17–20** | OSHA 5600: OSHA Disease Site Worker Train-the-Trainer (*Richland*) |
| **Oct 3–6** | OSHA 6000: Collateral Duty for Other Federal Agencies |
| **Oct 24–26** | OSHA 2264: Permit-Required Confined Space Entry |
| **Oct 24–27** | OSHA 500: Trainer Course for Construction Industry (*Portland*) |
| **Nov 1–3** | OSHA 2250: Principles of Ergonomics (*Richland*) |
| **Nov 3–4** | OSHA 7600: 16-Hour Disaster Site Worker |
| **Nov 7–19** | OSHA 3095: Electrical Standards (*Portland*) |
| **Nov 14–17** | OSHA 511: General Industry Standards |
| **Nov 15–18** | OSHA 3110: Fall Arrest Systems (*Anchorage*) |
| **Dec 5–7** | OSHA 503: Construction Trainer Update (*Portland*) |
| **Dec 5–8** | OSHA 3110: Fall Arrest Systems |

## NW CENTER FOR OCCUPATIONAL HEALTH & SAFETY

| | |
|---|---|
| **Jul 18–19** | Oil Spill Response and Prevention |
| **Jul 20, 21** | Annual Hazardous Waste Refreshers |
| **Jul 22** | Annual Hazardous Waste Refresher (*Olympia*) |
| **Jul 23** | Supervising Hazardous Waste Operations |
| **Sep 27** | As Workers Grow Older: Achieving Safety & Productivity (*Tacoma*) |
| **Oct 5** | Annual Hazardous Waste Refresher |
| **Oct 6** | Occupational & Environmental Medicine Grand Rounds |
| **Oct 12** | Risk Communication Unplugged (*Bellingham*) |
| **Oct 19** | Wood Smoke: Burning Health Issues |
| **Nov 2–3** | Clear Writing for Safety and Health Professionals |
| **Nov 10** | Occupational & Environmental Medicine Grand Rounds |

*Matt Keifer*

***Second International Scientific Conference on Occupational and Environmental Health***

| | |
|---|---|
| ***Where*** | Hanoi, Vietnam |
| ***When*** | November 16–18, 2005 |
| ***Important*** | July 29, 2005–deadline for abstract submission |

# 2004-2005 DEGREES

*The Department of Environmental and Occupational Health Sciences awarded 16 Bachelor of Science degrees, 13 Master of Science degrees, seven Master of Public Health degrees, and five Doctor of Philosophy degrees this year.*

### Summer 2004

Kathleen Bradley, MS
Falahyah Rozaly, BS
Shengli Shi, PhD
Kathryn Toepel, MS
Lisa Younglove, MPH
Wenjie Zhu, MS

### Autumn 2004

Ryan Allen, PhD
Nicole DeFrank, MS
Fabiola Estrada, MS
Kevin Gallagher, BS
Julia Gohlke, PhD
Marie Martin, PhD
Thai Nguyen, BS
Megan Yoshimoto, BS

### Winter 2005

Michelle Bradley, BS
Raveena Pillay, BS
Joshua Robinson, MS
Shukriya Zarif, BS

### Spring 2005

George Astrakianakis, PhD
Heather Barr, MS
Paige Beckley, BS
Bryan Berna, MS
Jing Chen, MS
Diana Cortes, BS
Jennifer Crowe, MPH
Kristin Cunningham, MS
Emily Duffield, MPH
Nawo Fiamo, BS
Michael Harris, MS
Stephen Hunt, MPH
Sham Juratli, MPH
David Klavens, MS
Heather Klintworth, MS
Daniel McClung, BS
Neha Nariya, BS
Selena Ngo, BS
Aiza Redosendo, BS
Fiona Sands, MPH
Christine Scott, MPH
Yvonne Yuen, BS
Elisa Truong, BS

*Joel Levin*

*Summer graduate Nitasha Beri and spring graduate Neha Nariya at the 2005 UW Commencement exercises*

Two longtime faculty members retired this spring. **Gerald van Belle,** professor in Environmental Health and Biostatistics, and former department chair, has been at the UW for 30 years, and has been affiliated with the department for the past 15. **Sharon Morris,** senior lecturer and assistant chair for outreach, has been with the department 23 years. Both were awarded emeritus status.

**Namura Nkeze,** undergraduate program manager, won the department's distinguished staff award this year. The other nominees were **Glen Abel, Marc Beaudreau, Keli Bort, Barbara Brooner, Susan Brower, Lynn Fritzen, Stacey Holland, Southimala Keovernkhone, Rory Murphy, Becky Rooney, Rosie Schaffer, Azure Skye, Jianbo Yu** and a group nomination for the Institute for Risk Analysis and Risk Communication.

**Yupeng Wang** was selected as the 2005–06 Magnuson Scholar from the School of Public Health and Community Medicine. He is a doctoral student in the Toxicology program and studies with Zhengui Xia.

**Samir Kelada** was named as the outstanding graduate student and **Paige Beckley** as the outstanding undergraduate.

Senior Lecturer **Chuck Treser** was nominated for the 2005 Marsha L. Landolt Distinguished Graduate Mentor Award and **Zhengui Xia** for the UW Distinguished Teaching Award.

King County's Healthy Homes program and the national Pediatric Environmental Health Specialty Unit (PEHSU) program received EPA's 2005 Children's Environmental Health Excellence awards. Clinical Assistant Professor **Tim Takaro** is involved with the Healthy Homes program and **Catherine Karr** is director of the UW PEHSU program. The EPA launched the awards this year to increase awareness, stimulate activity, and recognize efforts that protect children from environmental health risks.

Graduate student **Sinang Lee,** a research assistant in **Richard Fenske's** lab, is spending the summer in Cambodia studying pesticide exposures.

Associate Professor **Bill Daniell** will represent the department on the faculty senate.

Research scientist **Carol Trenga** participated in an Across Cultures Business & Cultural Exchange trip to Lithuania, Latvia, and Estonia. These Baltic nations recently joined the European Union, which introduces new environmental laws and standards. They face environmental challenges, including a legacy of nuclear and hazardous waste and an underdeveloped infrastructure for water and sewage treatment.

Professor **Dave Eaton** has been selected as a "designated lifetime national associate" of the National Academy of Sciences. He was also elected as vice president of the Toxicology Education Foundation for 2005–2006.

Lecturer **Rick Gleason** made two presentations at the Boise Voluntary Protection Program Association meeting, one about the department's construction train-the-trainer programs and one on "what a VPP star industrial hygiene program would look like."

**Amanda Rehr,** a 2000 graduate of the undergraduate program, is entering a PhD program at Carnegie Mellon University in Engineering and Public Policy. She will be working on the Consortium for Atlantic Regional Assessment (CARA), funded by EPA. The project involves making "tool

*Sharon Morris*

*Gerald Van Belle*

*Namura Nkeze*

*Yupeng Wang*

calculators" to help planners and policy makers plan for climate change.

Dr. **Mary Gulumian** has been visiting our department from South Africa's National Centre for Occupational Health and the University of Witwaters. She is president of the Society of South African Toxicologists. Her research interests include the health effects of silica, asbestos, and a variety of metals in the mining population.

**Maggie Trabeau**, a first-year industrial hygiene graduate student working with Noah Seixas, was one of six students nationwide to win a $5000 3M scholarship. The award included travel expenses to the American Industrial Hygiene Continuing Education conference in Anaheim, CA.

## CAREER DAY

About two dozen public health leaders from across the Pacific Northwest met with our department's graduating students on March 4 to discuss the varied employment opportunities available for environmental and occupational health graduates. The ninth annual career day provided an opportunity to build relationships between the business community, governmental and non-governmental agencies, the university, and students.

Kathy Hall

*Attendees at Career Day, March 4, 2005*

# TRAINING ON THE EDGE

*–continued from page 1*

Another highlight later turned to heartbreak. On Thursday, April 21, Jason Nowpakahok, the mayor of Gambell, and his 11-year-old daughter, Yolanda, stopped to see Mitchell. He opened his stash of jellybeans to the girl, who shyly accepted a few with her father's approval. About 45 minutes later, she returned without her dad—but with eight to ten of her friends—to see the man with the jellybeans. "Needless to say, I was wiped out in no time at all," he recalls. "What fun to watch their faces as they got something that they normally do not get. It made packing all those jelly beans worth it for me."

A week later, Mitchell received the tragic news that Jason, Yolanda, and two others had died when their whaling boat capsized in high seas. It made him realize how fragile human life can be in the far Northwest.

St. Lawrence is so special to its natives that they once gave up money for their land. When the Alaska Native Claims Settlement Act was passed in 1971, Gambell and Savoonga decided not to participate, and instead opted for title to the island's more than a million acres of land.

"I have trained all around the world," Mitchell said. "I was reflecting one night on the cultural experience I was having, and I realized I was still in the United States."

The temperature inched above zero most April days, but rarely above 10 degrees. "The cold was unbelievable," he said, "but the land has a clear beauty." Because of the harsh environment, the standard 5-year cleanup of the hazardous waste site will likely take 15 years, he said, because of the bitter winters and the short number of good days in the summer to actually work.

## FOR MORE INFORMATION

Chuck Mitchell's e-mail, *cmitchell21@qwest.net*

"Four missing or dead after whaling boat capsizes"
*http:www.adn.com/news/alaska/story/6429458p-6308563c.html*

Tribal home page, Gambell
*http://www.kawerak.org/tribalHomePages/gambell/index.html*

Tribal home page, Savoonga
*http://www.kawerak.org/tribalHomePages/savoonga/index.html*

Washington Post Magazine cover story on Savoonga
*http://www.washingtonpost.com/wp-dyn/content/article/2005/04/26/AR2005042601144.html*

## GRADUATION 2005

*Rep. Kenney*

More than 160 people crowded into the auditorium of the Henry Art Gallery June 10 to celebrate the accomplishments of the 2005 graduating class (see page 9).

Student speakers Neha Nariya, Janet Blackstone, and Heidi Curtiss recalled the two or more years of challenges that culminated in the ceremony.

The Hon. Phyllis Gutierrez Kenney, state legislator from Seattle, addressed the graduates, exhorting them to "make a difference in people's lives." She urged them to be the ones who "make it happen," reminding them "you don't learn to drive by being a passenger."

Kenney described her rise from the daughter of migrant farmworkers to the chair of the House Higher Education Committee. "What a wonderful dream," she said.

She emphasized the importance of the work of the Department of Environmental and Occupational Health Sciences by sharing a personal tragedy—her father's death from lung disease at age 56. She attributed his death to occupational exposures in the field.

## THE FINE PRINT


MANAGING EDITOR
*Sharon L. Morris*

SENIOR WRITER & EDITOR
*Kathy Hall*

EDITORIAL ASSISTANT
*Kipling West*

GRAPHC DESIGNER
*Cathy Schwartz*

DEPARTMENT CHAIR
*David A. Kalman*

*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 *Environmental Health News,* Box 357234, Seattle, WA 98195-7234

Phone: 206-685-6737

E-mail: *kjhall@u.washington.edu*

Find the department on the Web at *http://depts.washington.edu/envhlth*



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University of Washington
School of Public Health
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Department of Environmental and Occupational Health Sciences
Box 357234
Seattle, Washington 98195-7234



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