

# Director Steven Shea Receives Distinguished Service Award

Congratulations to Oregon Institute of Occupational Health Sciences Director, Steven Shea, who received the Distinguished Service Award from the American Academy of Sleep Medicine (AASM) during the 28th Annual Meeting of the Associated Professional Sleep Societies, held May 31 – June 4, 2014 in Minneapolis, MN. The award was presented in recognition of his 5 years service on the AASM Board of Directors.

The AASM is the only professional society dedicated exclusively to the medical subspecialty of sleep medicine. With the vision of achieving optimal health through better sleep, the AASM sets standards and promotes excellence in



AASM president Safwan Badr, MD (L), presents award to Steve Shea.

Oregon Institute of Occupational Health Sciences

health care, education and research. The

AASM was established in 1975 as the Association of Sleep Disorders Centers, and has a combined membership of nearly 12,000 accredited member sleep centers and individual members, including physicians, scientists and other health care professionals. From insomnia to sleep apnea, the AASM considers sleep disorders an illness that has reached epidemic proportions.

The AASM mission is to improve sleep health and promote high quality patient centered care through advocacy, education, strategic research, and practice standards.

#### Newsletter

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### Kent Anger wins Faculty Senate Award

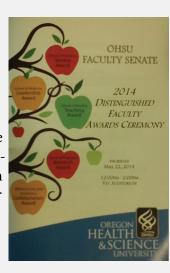


Dr. Kent Anger poses with his wife, Billie.

Congratulations are in order for Dr. Kent Anger, Associate Director of Applied Research at the Oregon Institute of Occupational Health Sciences and Director of the Oregon Healthy Workforce Center. Annually, faculty members at OHSU are recognized through the Faculty Senate Awards for their exceptional efforts in support of OHSU's mission. During the ceremony, Dr. Anger received the 2014 Faculty Senate Award for Collaboration. Nominees for the 2014 Collaboration Award were from OHSU's Affiliated Units and Institutes.

In endorsement letters provided by colleagues, Kent is described as productive, diligent, and energetic, and a genius at bringing together interdisciplinary experts to collaborate. He is a team player who has made extensive contributions to the development of workplace interventions aimed at improving the health and well-being of workers and their family members.

We offer our heartfelt congratulations to Kent.



## September Begins Conference Season

September in Oregon is not only a beautiful month, but kicks off a cycle of safety, health and wellness conferences. The fall of 2014 was no exception, and in fact was even richer than usual!

Occupational Health Sciences at OHSU was a proud sponsor of the American Heart Association's 5th Annual Worksite Wellness Summit, held Sep-

க<del>wer Up</del> Your Wellness Program

tember 17th, 2014 at the Oregon Convention Center. This year's theme was titled "Power Up Your Wellness Program with new ideas to spark Total Worker Health".

Equally exciting was the 5th Annual National Conference in Healthcare Ergonomics, which came to Portland's Oregon Convention Center on September 8-11, 2014. We were pleased to sponsor and participate in this high powered event.

Please join us for future conferences and events!



# Health Consequences of Sedentary Work Spring Symposium Presented by the Oregon Institute of Occupational Health Sciences at OHSU, Oregon Healthy Workforce Center and

the Oregon Division of Public Health

Sit less, move often, move more was the message from Dr. Nico Pronk, Senior Research Investigator, Health Partners, and Adjunct Professor, Harvard School of Public Health, during his keynote address at the Oregon Institute of Occupational Health Sciences Spring Symposium, Thursday June 5, 2014. His research showed that providing sit-stand desks in his company Dr. Saurabh Thosar (Oregon Institute of Occupational Health Sciences) followed with evidence that people who report prolonged sitting time die earlier — this is even true of individuals who are highly physically active. Consequences of sitting for as short a time as an hour are reduced blood flow in the thighs and increased blood pressure. Dr. Jennifer Hess warned that



reduced sitting time and reduced low back pain in employees. More than one speaker recommended standing and walking for a few minutes following sitting for an hour or less. 'Sitting is the new smoking' was mentioned by more than one speaker, suggesting that prolonged sitting has serious negative health consequences.



Drs. Pronk, Thosar, and Hess responding to questions from the audience. Occup. Health Sciences Director Steve Shea at right.

stretching and fitness is not a substitute for ergonomics. She focused on balance and muscle symmetry. For example, a worker returning too soon from an injury may avoid using a muscle that was not fully recovered, which can lead to asymmetric postures that produce further injuries.

Speakers provided examples of healthy exercise programs and addressed the need to provide exercise options that are culturally appropriate in order to maximize their effectiveness. A webcast of all the presentations is available at the Oregon Institute of Occupational Health Sciences Health & Safety Training web page under Outreach and Education (http://www.ohsu. edu/xd/research/centers-institutes/croet/outreach/sedentary-and-stationary-work.cfm).



Occupational Health Sciences Senior Research Associate Dede Montgomery introduces Kadalyst Wellness Director/Partner Kerwynn Prinzing (standing at lectern) who described an activity program that had changed her life.

### What's up with Epigenetics?

Did you know that your choices can alter the way your DNA works – all without changing the "letters" that make up your genetic code? You may have heard of genetics, but what about *epigenetics*? It is a brand new field of science and was even recently featured on National Public Radio!



In collaboration with epigenetic researcher, Dr. Mitchell Turker, at the Oregon Institute of Occupational Health Sciences, Let's Get Healthy! developed a set of classroom lessons on epigenetics and an interactive video game that teaches about why our life choices matter.

The epigenetics station debuted at St Helens Middle School, where 450 students attended the Let's Get Healthy! fair that day. Students could explore the interactive video game or DNA manipulatives to learn how epigenetic marks on our DNA can influence our health, our risk of disease, and can be passed to future generations. Student understanding of epigenetics was measured using preand post-surveys given in the classroom and through

questions integrated into the game. In pre-surveys, only 8% of students had ever heard of the term "epigenetics" before. After the fair, students showed significant increases in their understanding of epigenetics and talked about it more frequently to their friends, teachers and family.

Learn more about epigenetics. Even better, play the game yourself!

This project was funded by a pilot project grant from the OHSU Bob and Charlee Moore Institute for Nutrition and Wellness and by the National Institutes of Health through a grant to the Interdisciplinary Center for Epigenetics, Science and Society (5P20HG00551).

Let's Get Healthy! is funded by a Science Education Partnership Award (SEPA) from the National Institutes of Health. For more information, visit Let's Get Healthy! (www.letsgethealthy.org).



Students engage in Let's Get Healthy! activities.

#### Welcome Summer Interns!

June brings us many new faces in the form of sharp and energetic college students. Summer 2014 was no exception, and we were pleased to greet our 14 summer interns who supported Occupational Health Sciences and Oregon Healthy Workforce Center research.

All of the students selected for these paid internships are either Oregon residents or attend Oregon schools. Students spent three months working alongside researchers and faculty on basic and applied research projects, and sharing their own research



Congratulations to the following students who were selected as our 2014 Summer Interns:

Aviva Browning – Lewis & Clark College, Portland, OR – Anger Lab

Jami Cheng – Johns Hopkins University, Baltimore, MD – Rohlman Lab

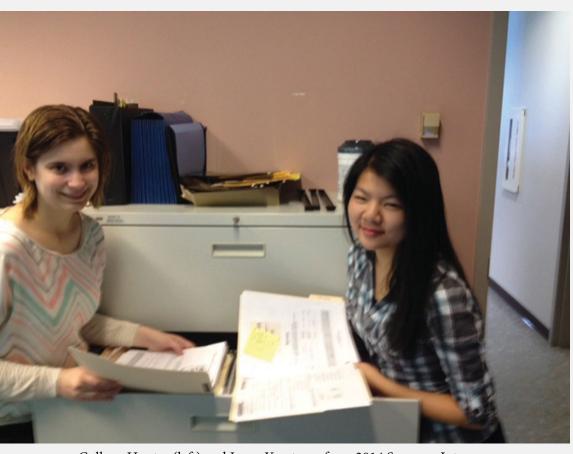
Devin Christiansen – Portland State University, Port land, OR – Anger Lab

Leanne Hicks – Portland State University, Portland, OR – Hammer Lab

Colleen Hunter – Pacific Univ. Oregon, Forest Grove, OR – Olson Lab

Michael Jacobson – Reed College, Portland, OR – But ler Lab

Krista Leonard – Willamette University, Salem, OR – Rohlman Lab



Colleen Hunter (left) and Jeana Yee, two of our 2014 Summer Interns.

Hilary Nichols – Western Washington Univ., Belling ham, WA – McCullough Lab

Tiffany Nguyen – Yale University, New Haven, CT – Rohlman Lab

Silvia Plascencia – Univ. of Portland, Portland, OR – Kretzschmar Lab

Grace Recht – Ohio Wesleyan University, Delaware, OH Kuehl Lab

Ryan Stadnik – Univ. of Colorado Boulder, Boulder, CO – Spencer Lab

Madison Trowbridge – Linfield College, McMinnville, OR – Shea Lab

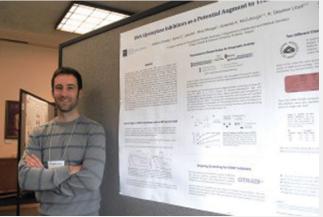
Jeana Yee – Johns Hopkins University, Baltimore, MD Olson Lab

Thank you to all students who submit applications to this program. Learn more about our Summer Intern Program at http://www.ohsu.edu/xd/research/centers-institutes/croet/outreach/awards.cfm

#### Celebrating OHSU Research

Congratulations to all of the OHSU researchers, including our staff from Occupational Health Sciences (pictured below), upon a successful research week.

OHSU Research Week is a university-wide event



Nate Donley



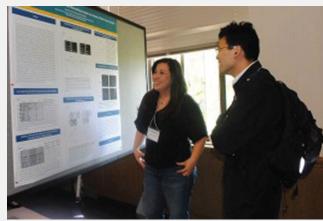
Megan Parish



Naima Laharnar



celebrating the excellence of research performed by students, faculty, research-ranked employees, postdocs and staff across all schools, centers, institutes and education programs. The 2014 OHSU Research Week took place May 5-9.



Eleonora Juarez (L)



Harini Sampath (L)



Anna Ohlrich, Gwen Hryciw and friend



Sudeshna Dutta

#### 1st International Symposium Advances Total Worker Health™

The 1st International Symposium to Advance Total Worker Health™ (TWH) was held October 6-8, 2014 on the campus of the National Institutes of Health in Bethesda, Maryland. Together with the National Institute for Occupational Safety and Health (NIOSH), • Dr. Elliot also chaired the symposium, Teaming up Office for Total Worker Health and 14 other prestigious partners, more than 500 scientists and practitioners from around the world came together to learn the state of the science of and practice of TWH using a coordinated approach that integrates health protection and health promotion.

As part of a packed agenda, the Oregon Healthy Workforce Center presented these talks:

- OHWC Director Kent Anger, Ph.D, with other Center Directors, presented: Research Frontiers in Total Worker Health™: Unique Perspectives from the NIOSH TWH Centers of Excellence.
- Ryan Olson, Ph.D. chaired the Total Trucker Health™: The Drive to Improve Symposium, and presented: The SHIFT Intervention for Truck Drivers Produces Significant Weight Loss in a Randomized Trial.
- Donald Truxillo, Ph.D. presented: Applying Psychological Lifespan Development Theory and Research to Interventions Targeting Older

Workers.

- Diane Elliot, MD, presented: Taking an Evidence-Based Total Worker Health™ Program Online.
- for Total Worker Health™, which included the presentations, "A Conceptual Framework for Teams and Total Worker Health™ (presented by Dr. Elliot); SHIELD (Safety & Health Improvement: Enhancing Law Enforcement Department) Teams & a New Total Worker Health™ Model for Police Officers (Presented by Kerry Kuehl, MD, Ph.D.); SHIP: A Team-base Worklife and Safety Support Intervention for Construction Workers (presented by Leslie Hammer, Ph.D.); and, COMPASS Teams: Creating Health & Safety "Communities of Practice" for Home Care Workers (presented by Dr. Olson.)
- Special Populations Young Workers and Total Worker Health<sup>™</sup> including papers presented by Diane Rohlman, Ph.D., and Megan Parish, MPH. (Developing a Methodology for Identifying and Prioritizing Factors in Young Workers Injuries: A Pilot Study; and, Technology Meets Total Worker Health: Evaluating Online Training for Young Workers).

### Things are Looking Up for Occupational Health & Safety in Southern Oregon

The annual Southern Oregon Occupational Safety & Health Conference, held October 15-16, 2014, recorded the second largest attendance ever in its 24-year history, reflecting a much-improved economy in the region. Three hundred sixty six attendees, not counting exhibitors and sponsors, were treated to a variety of excellent and timely educational sessions.

Keynote speaker Anil Mathur, President and CEO of Alaska Tanker Company (ATC), Portland, set an optimistic mood for the conference. He described how ATC was able to transform a mediocre safety performance in 1999 to become the safest oil



tanker company in the world: 12 years and 14 million man-hours with only one time-loss injury, a dislocated finger. His presentation outlined how ATC achieved this transformation and what they are doing to sustain safety performance by avoiding complacency that could occur in the face of such excellent performance.

Much thanks to the Oregon Occupational Safety and Health Division (Oregon OSHA) and the Southern Oregon Chapter of the American Society of Safety Engineers (ASSE) for their joint effort in

sponsoring this amazing conference.

### 2014 Western Pulp, Paper, & Forest Products Safety & Health Conference Going "Viral"

The Oregon Institute of Occupational Health Sciences has been attending this conference for many years, but this year we noticed something extraordinary. A formerly sleepy conference has taken on new energy and is attracting attendees from as far away as South

Carolina and surrounding states. And all participants, from health and safety managers to loggers in the field, showed an eagerness to improve safety in their workplaces.

Perhaps it is because this conference is one of only a few health and safety conferences in the United States addressing the needs of the woods products industry. Or maybe it's

because this conference offered timely topics for both loggers and forest products operators...who knows? Nevertheless, this is great news for those concerned about safety, health and wellbeing in an industrial sector that has traditionally been one of the most hazardous.

We were interested in learning about what most concerns wood products workers in their jobs, so we posed the following questions (see photo): What's on your mind? What's of concern in your workplace? The most common expressed concern related to sleep;

workers often feel as though they are not able to get enough. Sound familiar? Sleep is a hot topic, because research is showing that abnormal sleep is a major factor in a variety of disease states, including obesity and heart disease, among others. Our institute is conduct-

> ing a variety of research in this area. The many other concerns posted by participants can be seen in the photo.

> > And finally, we have to mention our Oregon Fatality Assessment and Control Evaluation (OR-FACE) program. OR-FACE is producing a wide variety of Tool Box Talks that address workplace fatalities in Oregon and how to avoid

them. These were very popular at this conference. You can access and download the OR-FACE Tool Box Talks series on the OR-FACE website.

This conference was a joint effort of the Oregon/Idaho/ Utah Pulp & Paper Workers Council of AWPPW, Oregon Occupational Safety & Health Division (Oregon OSHA), the Washington/Alaska Council of AWPPW, the Washington Department of Labor & Industries (DOSH), USW, the pulp and paper manufacturing, and forest products industries.



#### Social Support, Mindfulness and Workplace Health

Our fall symposium, Healthy Workplace Solutions, introduced evidence and new ideas for improving workplace wellbeing and health.

Dr. Lois Tetrick reminded us the burden that stress plays in most of our lives, identifying top worker stressors as low salaries, lack of opportunity for job growth, job insecurity, uncertain job expectations and long hours. She pointed out that organizational level interventions – which can be so effective – are still relatively rare.

Dr. Joel Bennett shared how successful and healthy organizations foster healthy social connections to improve individual and organizational resiliency, using leadership, management, champions, peer-to-peer and individual "touch points."

Some of us were less familiar



Lois Tetrick. Ph.D.

with the information shared by Dr. Robert Roeser on improving occupational health and wellbeing through mindfulness training. He brought us up to speed on the extent of peer-reviewed publications and research studies on mindfulness, along with the successes demonstrated in his research with teachers and students using mindfulness to reduce stress and improve work and health outcomes.

Our own Dr. Ryan Olson demonstrated the importance of combining environmental change with employee involvement together with social prompt and consequence for improved work, safety and health.



Ryan Olson, Ph.D

You can watch a recorded webinar of this event on our symposium webpage at http://tinyurl.com/o7v6dsy.

#### **OR-FACE** Publishes More Toolbox Talk Guides

Safety communication is an integral part of maintaining an injury prevention culture. Its implementation can be in a variety of methods such as warning labels, safety trainings and meetings, hazard alerts and informal communications between supervisors, workers, and co-workers.

In her ~30 years of experience as a safety and health professional, Illa Gilbert-Jones, program manager of the Oregon Fatality Assessment and Control Evaluation (OR-FACE) program, has learned that increasing the level of interaction between supervisor and workers about safety positively influences safe behaviors. Moreover, if the interaction is about real world, relatable

Work away from pinch points or swing pivot areas
 Avoid loose clothing when operating machinery
 Conduct hazard assessments for tasks to ensure safe work procedures

events, the impact can be significant.

Toolbox talks are a common form of safety communication, especially in construction but they have been used as daily pre-shift meetings in general industry. OR-FACE has created several toolbox talk guides and recently published four. These two-page documents are based on information gathered from Oregon fatality investigations. One side of the toolbox talk is

a simple line drawing for viewing from a distance and for ease in understanding the key elements of the incident. At the bottom of the line drawing are key actions to prevent a similar incident. On the other side, are instructions for leading the toolbox talk, a narrative of the incident, bulleted items that reiterate the key pre-

vention actions and a list of questions to facilitate a discussion on current practices, unsafe conditions, and commitment to an action plan.

The overarching goal of these toolbox talk guides is to provide supervisors/leaders with documents to increase interaction and positively influence safe behaviors. The format uses evidence-based safety communication principles and real-world (Oregon) relatable events.



# Investigating the Effects of Dleep Disturbance on the Health of Space Travellers

We all know that adequate sleep is a necessity for good in Houston, Texas. The workshop goals were to: re health and that exposure to chronic abnormal sleep cycles, such as that experienced by shift workers, can lead ronmental factors on sleep; review state-of-the-art

to a variety of chronic diseases like diabetes and heart disease. Now, consider the challenges that space travel poses for maintaining normal sleep. For example, astronauts on the International Space Station, instead of experiencing a 24-hour solar day, complete one solar cycle every 90 minutes! Such an unnatural environment can potentially wreak havoc on a mammalian circadian system that has evolved over millions of years to synchronize with the 24-hour rotation of the earth.



Dr. Steve Shea (front row, far left) and attendees of the NSBRI-NASA workshop.

Oregon Institute of Occupational Health Sciences Director Steve Shea has been investigating how the heart and vascular system responds to disrupted sleep in the space environment. Dr. Shea has a research grant funded by NASA entitled: Identification of Cardiometabolic Vulnerabilities Caused by Effects of Synergistic Stressors that are Commonly Encountered during Space Missions. The major goal of this grant is to assess the cardiovascular system responses to exercise, postural tilt and mental stress during combined sleep loss and circadian misalignment, as occurs with space flight.

Recently, Dr. Shea participated in a workshop sponsored jointly by the National Space Biomedical Research Institute (NSBRI) and the National Aeronautics and Space Administration (NASA) titled Sleep on Earth and in Space: Risk Factors, Health & Performance Outcomes, and Countermeasures, Sept 29-30,

knowledge of the effects of sleep or insufficient sleep on multiple physiological and psychological functions; and encourage inter-disciplinary work, including countermeasure development, on these topics.

This type of workshop will lead to new research assessing the health impact of spaceflight on astronauts, including during possible long-term missions to Mars and back, which would take over a year. Scientists want to answer the question: if achieved sleep falls below desired levels, or if circadian misalignment occurs for prolonged periods, what mitigating strategies and countermeasures for health and performance outcomes can be used?

Dr. Shea is Editor-in-Chief of the journal Nature & Science of Sleep.

# AHA Worksite Wellness Summit on TWH Sponsored by Occupational Health Sciences

The American Heart Association Worksite Wellness

Summit was held September 17, 2014 at the Oregon Convention Center in Portland. Over 300 participants learned about effective tools and techniques for improving health, safety, wellness and wellbeing – Total Worker Health. The Oregon Institute of Occupational Health Sciences was the presenting sponsor supporting the Oregon Healthy Workforce Center's Total Worker HealthTM (TWH) theme, also the

The Summit was keynoted by Renee Coombs of SAIF, Oregon's largest workers' compensation insurance company, who described her corporation's transition to TWH which she described as continually changing and growing in her comments on the panel that followed her

Summit's theme.

keynote. Brian Passon led the panel.

After a physical activity break and lunch, the meeting



broke into sessions on workforce wellness initiatives

and strategies – and a session on establishing TWH programs in your companies led by Dede Montgomery of Occupational Health Sciences and Deb Fell-Carlson of SAIF.

The meeting ended with energizing talks by Dawn Robbins on diversity to empower wellness programs (looking thoughtfully to the future), Michaelle Davis on Campbell Global's approach to Wellness (offering her help to others)

and Evin Cole on the power of positive thinking (with examples of turning negative messages into positive ones). Interspersed with these interesting and interactive presentations were opportunities to interact with dozens of vendors who provided resources on TWH and wellness to the attendees.



Dr. Steve Shea presents at the Worksite Wellness Sum-

mit convened by the American Heart Association of

Oregon.

Fred Berman, Kent Anger, and Leslie Hammer at the Oregon Healthy Workforce Center and Oregon Institute of Occupational Health Sciences exhibit

And it should be said that AHA knows how to

put on a meeting – two activity breaks and the healthiest breakfast (granola, fruit and yogurt) and lunch options ever. Meeting coordinators take note! Con-



Dede Montgomery

gratulations to Lanette Trickey and the coordinating committee of the American Heart Assocation Worksite Wellness Summit bringing an energizing and compelling series of presentations.

#### Look Who is Standing Now

Occupational Health Sciences prioritized the installation of sit-stand work stations for our employees this past year. And as organizations have learned, we had to plan ahead to budget for this process.

Arranging standing options for desk-bound work was an important priority for our overall health and safety – we have closely followed and in some cases added to the research demonstrating the importance of standing and moving during the work day. Here's some of what we learned:

- If funds are limited, prioritize allocation of work stations by total amount of time seated during the day, and personal interest, or develop a rotation plan.
- Install one or more sit-stand devices in communal areas to give staff an opportunity to test out if this is a good option for them, and to assist with selection of different options.
- Emphasize best practices for use most people are best served by a combination of sitting and standing throughout the day: It is generally best to alternate standing and sitting. So, the stations should be easy to raise or lower.
- Encourage movement throughout the day. Download our tip sheet: Solutions to Get People Moving (http://tinyurl.com/qc9zbr7).

What's happening in your workplace?

#### Resources:

Sedentary, Stationary and Physically Demanding Work - http://tinyurl.com/p26b8qw

Total Worker Health and Wellness Topic - http://www.croetweb.com/links.cfm?topicID=92



Director Dr. Steven Shea inspects a shipment.



Janice Stewart enjoys work while standing.

#### PNASH meets at Oregon Health and Science University

The Pacific Northwest Agricultural Safety and Health (PNASH) Center Advisory Committee held its 2014 meeting at Oregon Health & Science University (OHSU), pictured below. PNASH is a NIOSH-funded regional Center that supports research projects and outreach in Washington, Oregon, Alaska and Idaho.



The current PNASH project in Oregon is designed to study stress in agricultural workers and develop and test an intervention to reduce stress in workers. Drs. Diane Rohlman and Kent Anger of OHSU and the Oregon Healthy Workforce Center (OHWC), sited at the Oregon Institute of Occupational Health Sciences at OHSU, direct the project. Collaborators include Leda Garside, RN, Salud Services of Tuality Healthcare.

While this may seem to be a dizzying list of organizational names, it does reflect the degree to which federal and state funding enables linkages between scientists at different organizations, and projects are developed that require the expertise of scientists from different organizations. Each scientist is partly funded by NIOSH and state funding streams. PNASH Director Dr. Rich Fenske is on the left in the photo below.



A sample of PNASH-funded projects are being presented today. Examples are:

- OHWC Director Kent Anger noted the OHWC's recent review of Total Worker Health (TWH) research and revealed that there is no research to evaluate TWH interventions (to improve health and safety and wellness/wellbeing) in agricultural settings. TWH is a possible new area of focus for the
- Evidence of an association between asthma and elevated ammonia in air in farming areas, especially animal feeding areas (Catherine Karr of the University of Washington (UW), PI).
- Dr. Christopher Simpson (UW) described a new rapid measure of organophosphorus compound exposures, useful for workers applying the most widely-used agricultural pesticides worldwide, including some in Pacific Northwest tree fruit farms.
- Dr. Alice Larson spoke about her census of indigenous agricultural workers.
- Dr. Laurel Kincl described her new project with Dungeness crab workers(below).
- Nargess Shadbeh of the Oregon Law Center described the 10-year project to provide information on pesticide safety to Oregon's indigenous workers through promontoras speaking directly to the workers, a project in danger of ending due to the end of grant funding. Other funding mechanisms to maintain the human resources to present the information on, essentially, the Worker Protection Standard to indigenous workers, included state government and industry.

#### **OUTREACH**

As part of our outreach, we want you to know about the work we do, and how it benefits workers and businesses in Oregon. We invite you to browse our website, meet our outreach team at conferences, attend our health and safety symposia, consider our scientific seminars sponsored by our research faculty, or visit the Institute to learn more and to use us as a resource.

#### Visit us at:

http://www.ohsu.edu/xd/research/centers-institutes/oregon-institute-occupational-health-science

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