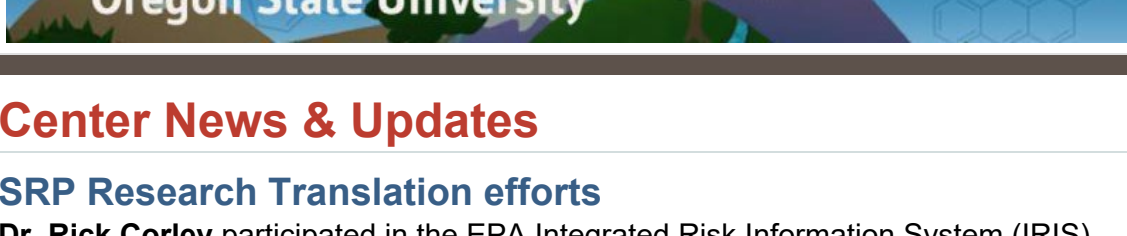


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Center News & Updates

SRP Research Translation efforts

Dr. Rick Corley participated in the EPA Integrated Risk Information System (IRIS) program to draft toxicological reviews of Benzo[a]pyrene (B[a]P). The meeting was held on June 29-30, 2016 in Arlington, VA. Dr. Corley provided expertise in PBPK modeling, specifically as the approach could determine appropriate dose-metrics for expressing absorbed B[a]P dose, modeling absorbed dose as a function of exposure parameters, and scaling absorbed dose between mouse skin and human skin. Additional information is available [online](#).

Dr. Molly Kile (CEC) was invited by the National Academies of Sciences, Engineering and Medicine to be a member of an ad hoc committee for the Veterans and Agent Orange: 11th Biennial Update. This committee will evaluate evidence to "determine (to the extent that available scientific data permit meaningful determinations)" possible generational health effects that may be the result of exposures to these chemicals-including the biologic plausibility or potential for an exposure to lead to an increased risk of birth defects or other adverse conditions in the descendants of male Veterans-and will address myeloproliferative neoplasms (MPN) as part of its consideration of the literature concerning leukemias and related diseases.

Dr. Justin Teeguarden (RTC) was invited to review the goals, accomplishments and plans of the Exposure Science in the 21st Century Federal Partners Working Group during a meeting of the group in Research Triangle Park, North Carolina. The ES21 FPWG is a partnership across multiple federal agencies, including the DOD, NIH, EPA, CDC and others, with the goal of advancing the application and use of exposure science through collective strategic planning and coordination, and leveraging of resources, tools and expertise through collaboration. More information available [here](#).

Dr. Diana Rohlman (RTC/CEC) was invited to participate on the [Cleaner Air Oregon Rules and Regulations Advisory Committee](#) in collaboration with the Oregon Public Health Association. The Committee is tasked with providing feedback on health-based air quality standards. The resulting feedback will be provided to the Oregon DEQ and Oregon Health Authority.

Research Updates

The McCormick and Baxter Superfund Site is located on the Willamette River in Portland, Oregon and has PAH contaminated soils and sediments from historical creosote operations. As part of an Oregon Department of Environmental Quality (ODEQ) ten year study to assess the effectiveness of the sediment cap, passive sampling devices from **Kim Anderson's** lab were deployed by U.S. EPA Region 10 divers in both sediment and water at the site. Included in this study was a newly designed passive sampling sediment probe which allowed for deployment in the rocky armoring of the sediment cap. Based on data from this study, the ODEQ reported that the sediment cap appears to be effective in meeting its remedial objectives. The full results of the study, used to inform ODEQ regulatory decision making, is available [here](#), beginning on page 20.

Work from **Staci Simonich** and **Rick Corley** has shown that certain pollutants can travel much farther than originally thought, due to shielding by organic aerosols. This shielding prevents chemical breakdown both protecting the pollutant and allowing it to travel farther. These findings have important implications for assessing cancer risk. The article was published in the [Proceedings of the National Academy of Sciences](#).

Dr. Rick Corley (Project 2) has retired from PNNL and the OSU Superfund Project. Dr. Jordan Smith has taken the lead on Project 2: *Cross-Species and Life Stage Comparisons of PAH Dosimetry*.
- [Breathing Easy, Rick Corley Retires](#)

Trainee Updates

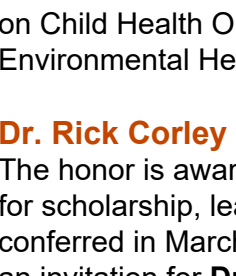
Lauren Heine (Core C) an undergraduate student at University of New Mexico, was a summer intern in the Tilton lab. Lauren received training in bioinformatics and RNAseq data analysis. She was awarded the Pfizer SOT Undergraduate Travel Award to present her research at the next SOT Annual Meeting in Baltimore, MD (March 2017). Her presentation is titled, Impact of Polycyclic Aromatic Hydrocarbons on Barrier Function Toxicity in a 3D Lung Model.

Lisandra Santiago-Delgado (Project 5) presented the results of her KC Donnelly research award at the 2016 NIEHS FEST in Durham, NC.



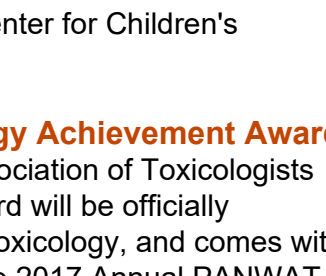
Lisandra Santiago-Delgado

Sydelle Harrison (CEC) was awarded an SRP Externship Award to work with the Yellowhawk Tribal Health Center (Confederated Tribes of the Umatilla Indian Reservation) in summer 2016. To read more, visit our [blog](#). Sydelle also presented her research at the Native Research Network Conference in June in Cherokee, NC. Her talk was titled, "A Mixed Methods Approach to Measure Competency in Oregon State University Research Scientists Working with a Pacific Northwest Tribe."



Sydelle Harrison

Undergraduate **Amelia Allee** was awarded through the Undergraduate Research Award Program in the College of Public Health and Human Sciences to continue her research with the CEC, evaluating cultural competency within the OSU SRP. This is a stated goal of the CEC. She recently presented her research concept at Research Day, hosted by the Department of Environmental and Molecular Toxicology.



Amelia Allee

Michael Garland and **Mitra Geier** were jointly awarded an SRP Externship Award to travel to PNNL for training in computational analysis of RNA-seq data. To learn more about their externship, read their article on the [SRP Blog](#).

Awards

SRP Investigator co-awarded for an ECHO grant

Dr. Kim Anderson is a co-investigator on a funded ECHO (Environmental Influences on Child Health Outcomes) application with the Columbia Center for Children's Environmental Health.

Dr. Rick Corley receives the 2016 PANWAT Toxicology Achievement Award

The honor is awarded annually by the Pacific Northwest Association of Toxicologists for scholarship, leadership, and service to the field. The award will be officially conferred in March at the annual meeting of the Society of Toxicology, and comes with an invitation for **Dr. Corley** to present a plenary lecture at the 2017 Annual PANWAT meeting.

Dr. Kim Anderson receives the Distinguished Professor Award

Each year the Oregon State Alumni Association selects an individual that demonstrates superior academic performance, professional renown, and service to the University and to the public. **Dr. Anderson** was the 2016 recipient.



SRP Trainee awarded Eric A Andreason 2016 Award

Derek Haggard, who recently defended his PhD, was awarded the 2016 Eric A. Andreason Memorial Graduate Student Award for Excellence in Research and Scholarship. The award was presented at the SOT meeting in New Orleans on March 14th.

SRP Trainee awarded Thurgood Marshall Graduate Scholarship Award

The Graduate School awarded SRP Trainee **Sydelle Harrison** the award, made in honor of Thurgood Marshall, who served as an Associate Justice of the Supreme Court of the United States.

Events

Oregon State University, University of New Mexico and University of Washington co-host an SRP trainee and Alumni Reception - March 13, 2017 Held annually, the three schools have traditionally met during the Society of Toxicology meeting. This year, the event has been expanded to invite all SRP trainees attending the 2017 Society of Toxicology meeting.

Annual Semiahmoo Symposium on Environmental, Occupational and Public Health - Jan 5-6, 2017

Held in Blaine, WA, this is a joint meeting of the public health schools from University of Washington, University of British Columbia, Simon Fraser University, Oregon State University and the University of Victoria. Several of our SRP investigators attend annually.

EMT Research Day - Jan 20, 2017

The 8th annual Research Day is sponsored by TEAM Tox, a graduate student organization comprised of students in the Department of Environmental and Molecular Toxicology, many of whom are also SRP Trainees. Students are encouraged to share their research via poster or platform presentations.

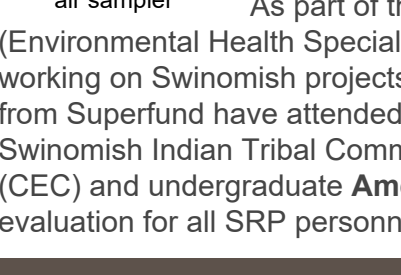
Environmental Health Science Colloquium

Held on the third Thursday of each month, SRP trainees and investigators gather to present their research. The next presentation will be by SRP Trainee **Courtney Roper**, titled "Particulate Matter Screening in Zebrafish."

Pacific Northwest Association of Toxicologists Work Shadow Event

Drs. **Stacey Harper** and **Susan Tilton** organized a work-shadow mentoring event for SRP trainees at the 2016 Annual Pacific Northwest Association of Toxicologists (PANWAT) held at Oregon State University (Sept. 29-30, 2016). The work-shadow event was co-sponsored by the OSU SRP Training Core and PANWAT.

Media Highlights



Dr. Staci Simonich

Globe-trotting pollutants can raise cancer risk Work by OSU SRP researchers Drs. Staci Simonich (OSU) and Rick Corley (PNNL) was published in the Proceedings of the National Academy of Sciences. This work has important implications for understanding the cancer risk posed by pollutants from far away sources. To learn more, read these related press releases:

- [Globe-trotting pollutants raise some cancer risks four times higher than predicted](#)
- [Mt. Bachelor readings verify pollution's longer travels](#)
- [Lung Cancer Risk Raises by Four Times due to Shield-Protected Pollutants](#)
- [On the move pollution more health-impacting than](#)

[once thought, study reveals](#)

- [Toxic fumes from cars, power plants raise 'ageing brain' risk](#)

- [Dangerous Drifting Particles](#); a Public Radio Interview

Tracking Poverty

Dr. Kim Anderson's wristbands have been utilized to track poverty and access previously hard-to-collect data in parts of Africa. Listen to the [Science in Action](#) podcast for more information.

Flame Retardants and Children's behavior

SRP investigators Molly Kile and Kim Anderson collaborated with College of Public Health and Human Sciences faculty on this interdisciplinary study.

- [Researchers find link between social behaviors among children and exposure to flame retardants](#)
- [Flame retardant chemicals may affects social behavior of young children](#)
- [Flame retardants may lead to aggressive behavior in children says study](#)

Using 21st Century Science to Improve Risk-Related Evaluations

Dr. Justin Teeguarden (RTC) was the lead author of a report that will be used by the Environmental Protection Agency and the Food & Drug Administration.

- [Teeguarden Part of a Report Offering Novel Paths to Assessing Health Risks](#)

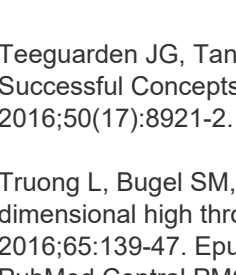
Benzo[a]pyrene and Developmental Impacts

A recent publication in Neurotoxicology and Teratology indicates that the impact of benzo[a]pyrene appears to neurotoxic larval behavior and ultimately impairs adult learning, in a zebrafish model. The work was performed in **Dr. Robert Tanguay's** laboratory as part of Project 3. Read more in the [press release](#) published by Oregon State University.

SRP Trainee highlighted in the news

SRP Trainee **Andres Cardenas** was recently quoted in Costa Rica Journal, discussing the health effects as a result of consuming arsenic-contaminated water.
- [Arsenic Levels in Bagages Drinking Water Improving, But Still a Concern](#)

Tribal-University Partnership



SRP Trainee Amber Kramer cleans bees out of a high volume air sampler

This year, the OSU SRP and research partner Swinomish Indian Tribal Community kicked off two new collaborative studies.

This work is protected under a Data and Material Sharing and Ownership Agreement.

SRP trainee Amber Kramer has been working with Swinomish staff to deploy and collect filters, and even check on potential bee infestations. To learn more about this partnership, please go to the [CEC Newsletter](#).

Swinomish Indian Tribal Community Cultural Tours

As part of the collaborative work, Swinomish Elder Larry Campbell (Environmental Health Specialist) requested all Superfund investigators and trainees working on Swinomish projects attend cultural training. Seven trainees and four faculty from Superfund have attended these cultural tours, led by Mr. Campbell and the Swinomish Indian Tribal Community reservation in LaConner, WA. **Sydelle Harrison** (CEC) and undergraduate **Amelia Allee** (CEC) are conducting a cultural competency evaluation for all SRP personnel, including those that have attended the tours.

Recent Publications

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The OSU Superfund Research Center was established in 2009 and brings together a multidisciplinary team with years of experience in polycyclic aromatic hydrocarbons (PAHs) and environmental health issues.

The Superfund Research Program is federally funded and administered by the National Institute of Environmental Health Sciences (NIEHS grant #P42 ES016465), an institute of the National Institutes of Health.

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