Fadi Fathallah from UC Davis received a 4-year grant to fund California AgrAbility, a program that improves the lives of people with disabilities by helping them to stay working in agriculture. The program offers bilingual technical assistance, rehabilitation, education, referrals, and advocacy to workers with disabilities along with its partner, AbilityTools.

“Agriculture is one of the most hazardous industries in the United States, with over 20,000 disabling injuries in California each year,” reports Principal Investigator Fathallah, a professor of Engineering in the UC Davis Department of Biological and Agricultural Engineering.

California AgrAbility has helped more than 600 small farmers and Latino farmworkers with disabilities with funding from the U.S. Department of Agriculture National Institute on Food and Agriculture. The program offers assistive technology solutions as simple as ergonomic handles for moving potted plants in nurseries, to more complex solutions such as modified steering wheels in farm vehicles, or assistive lifts to help drivers enter their tractors or operate heavy equipment.

One farmer who recently benefited from the program is Anna. When her disease symptoms began to interfere with her work on the farm, she realized it was time to get help. Anna has multiple sclerosis, continues to page 3
In this encyclical, the pope is currently collaborating on the development of a mechanism to place a price on carbon emissions. Governor Arnold Schwarzenegger refused to allow CARB to openly discuss a carbon tax, fearing that it was a politically impossible approach. In response, CARB worked to develop a credible and a gaming-free cap-and-trade system. That system was launched in 2012 and has been a remarkable success to date. Quebec linked with California in 2014 and since the inception of the program over $2.2 billion in revenue has been raised from the sale of auctions. By California law (SB35), 25 percent of that revenue has to be spent to the benefit of disadvantaged communities. This has been defined by the California Department of Atmospheric Research and the California Air Resources Board. The outcome has been a successful linked cap-and-trade program that has been effective in reducing greenhouse gases.

That said, I am exasperated by the pope’s weighing into the climate change debate. He is a heavy hitter when it comes to his efforts and his moral authority, but perhaps the biggest news about the encyclical is that the pope got it wrong. Brown has described the pope’s efforts as a powerful person, issues this encyclical as a powerful person, and perhaps the pope also misstepped. For instance, regarding climate change, the pope said, “We face a radical threat to life on this planet. It is a threat to the future of humanity.”

Through a collaboration between California AgrAbility Project and the California Department of Rehabilitation, Anna received financial support for two assistive devices for harvest — a cooling vest and an air conditioning unit — to cool her body temperature in periods of extreme heat. “This [AC] unit helps me to fully engage in life and community during the hotter months,” noted Anna. “I can barely imagine how summer life will be, since I have spent so many summers incapacitated at home.”

Fathahllah and his colleagues not only connect workers like Anna with the latest health and safety interventions, they also design new ones. For example, to bring nursery propagation workers back from disability due to repetitive strain injuries, they developed the “Air Klipper,” a harvesting tool that allows workers to reduce hand and arm fatigue so Anna could work more comfortably, despite the challenges of MS.
California Heat Standard Revisions Bring New Protections for High Risk Workers

The California Occupational Safety and Health Standards Board (OSHSB) approved important revisions to the Division of Occupational Safety and Health (better known as Cal/OSHA) heat illness prevention standard by a majority vote effective May 1, 2015. The current OSHSB members include Patricia Quinlan, deputy director of COEH, and Laura Stock, director of the Berkeley Labor Occupational Health Program.

The new changes will require employers to closely observe new employees during their first two weeks working in a high heat area, as well as all employees during heat waves; provide shade for all workers on a rest or meal break at 80°F (lowered from 85°F); provide water to employees free of charge and shade as close as practicable to workers; encourage employees to take preventative cool-down rest breaks in the shade; and develop and implement emergency response procedures, among other changes. The new standard applies to those employed in agriculture, construction, oil and gas extraction, and part of the transportation.

Currently, COEH scientists from UC Davis are studying physiological responses to heat and physical work in an inland valley field workers. The California Heat Illness Prevention Study (CHIPS) is a five-year project sponsored by the National Institute for Occupational Safety and Health and led by principal investigator Dr. Marc Schenker, the director of COEH at UC Davis. Their goal is to ensure agricultural workers have the safest possible working conditions in a region where temperatures often exceed 100 degrees over the harvest seasons.

CHIPS researcher Sally Moyce, a doctoral candidate in Healthcare Leadership and Nursing Science from the Betty Irene Moore School of Nursing at UC Davis, is conducting a novel study exploring the links between kidney disease and heat exposure among farmworkers in California.

While a nurse at a clinic for migrant farm workers in Oregon, Moyce met a young woman diagnosed with chronic kidney disease. “It was baffling to us at the clinic because we didn’t understand why she had developed this,” said Moyce. “That experience really stuck with me. And, as I was sharing my background with Dr. Marc Schenker, I told him that story, and he said, you know, this is not as uncommon as you think.”

For her doctoral study, she has evaluated heat exposure and renal function in a cohort of 300 male and female farmworkers. The average age of the cohort was 38 years old, with the majority of participants aged 26 to 50 years. Moyce has completed her first year of data collection, including information about acute kidney injury and common preconditions such as hypertension, diabetes, age, and health history.

Although Moyce is in the data analysis phase of her project, her early results suggest occupational factors may play a role in the development of chronic kidney disease. “If you have repeat injury and you just never fully recover, it may eventually become a pathway to chronic kidney disease.

If you multiply that out to the number of shifts that people work over an entire season, and then over many years, the problem is actually quite frightening. It’s a big issue because the majority of this population back-legal status and access to healthcare and health insurance, so they have very limited access to life saving dialysis.”

“If it turns out that chronic kidney disease is directly associated with a preventable occupational hazard such as heat exposure or not enough hydration, then the new heat standards in California will potentially help to prevent kidney injury,” said Moyce.

Moyce received funding for her study from the Betty Irene Moore Foundation. The Western Center for Agricultural Health and Safety, the Health Initiative of the America’s PIMSA research program, and a grant from the UC Global Health Institute’s One Health Initiative.

For two weeks in April, four science-minded teenagers from the Center for Advanced Research and Technology (CART) in Clovis, CA, outfitted their school backpacks with some extraordinary equipment. A global positioning system (GPS) device, an air pollution monitors (PAS 2000 CE), a carbon dioxide sensor, and an anemometer, all as part of a unique community outreach initiative designed to measure their air exposure while in transit to and from school.

The project is part of the Children’s Health and Air Pollution Study, or CHAPS. A collaboration of UC Berkeley, Stanford, and Fresno State, CHAPS investigates the health effects of air pollution on children living in the San Joaquin Valley. According to the American Lung Association, this region of Fresno County has some of the worst air quality in the United States.

“The CHAPS project is innovative in that we estimate someone’s daily exposures based on residence and in the Workplace” (University of California Press). PT became interested in expanding their portfolio and approached Dr. Blanc to help them cover emerging issues in the field of environmental health.

“Household Hazards” has received nearly 50,000 hits since Dr. Blanc began posting essays approximately four years ago. “I don’t presume medical or environmental knowledge. And, I try to make the links between workplace issues, environmental issues, and consumer issues (on the part of my readers),” says Dr. Blanc, chief of the multi-campus Division of Occupational and Environmental Medicine (OEM) in the UCSF Department of Medicine. “It’s great to do something that takes you out of your usual, narrow confines. It makes you think about things differently.”

Dr. Blanc has posted roughly 50 posts for PT. Still, he says it is surprising which blogs will take on a life of their own. One of his most popular blogs highlighted the health risks of a chemical commonly used in the fragrance industry called galaxolide, a synthetic musk used after musk deer were hunted to near extinction for their “natural” perfume. After a professional colleague asked him what he knew about galaxolide, Dr. Blanc began digging into the research. He found that, not only does it persist in the environment, but galaxolide is detectible in humans and displays the potential to interfere with estrogen hormonal function, raising alarm bells for consumers.

Dr. Blanc also has a new book project underway with Yale University Press. “The book focuses on 260 years of a very toxic chemical called carbon disulfide. It looks at what the effects have been predominately on workers, but it also looks at the cultural and political context of the manufacturing,” explains Dr. Blanc.

To read a sampling of Dr. Blanc’s posts for PT, visit: hps://www.psychologytoday.com/blog/household-hazards.

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Heart Disease and Work: What is the Connection?

Highlights from the UCSF Occupational and Environmental Medicine CME Conference, March 2015

Story by Raj Puri, MD

Fellow Physician, Division of Occupational and Environmental Medicine, UCSF

There were numerous highlights in this year’s annual UCSF Occupational and Environmental Medicine (OEM) and Continuing Medical Education (CME) conference. The theme focused on Cardiovascular Health and Public Health and was held in March at Fisherman’s Wharf, San Francisco. It was organized and chaired by Drs. Paul Blanc and Robert Kousnik. Conference participants included a diverse number of lecturers from occupational medicine, cardiology, dermatology, allergy and immunology, psychiatry, pharmacology, nursing, and others. The conference was fortunate to gain a large international presence from Sweden, both as attendees and as lecturers. Course participants also included OEM specialists from across the United States as well as international participants from Argentina, Australia, Austria, Canada, Iceland, Israel, Italy, and the United Kingdom.

The conference was prefaced a day in advance by a colorful poster presentation session illustrating interesting and unique links between cardiovascular diseases and occupational medicine. Posters also included many UCSF OEM trainees who were attending.

The conference began with one full day focused on “Cardiovascular Health and Disease.” The remaining day and a half comprised of “Updates” in OEM. The first day was launched by Dr. Mia Soderberg from Sweden who discussed epidemiological issues related to occupational heart disease. Later in the day, Dr. Bruce Bernard, an industrial hygienist, and Dr. Howard Maibach, a Public Health Service officer from NIOSH, gave an insightful lecture on occupational cardiopulmonary disease and vascular diseases.

Dr. Stefanos Kales, Residency Program Director and Chief of Harvard’s OEM program, discussed “Sudden Cardiac Death in Law Enforcement and Firefighting.” Finally, a panel discussion concluded the day with an interesting question and answer session.

The second day began with Dr. David Claman, Director of the UCSF Sleep Disorders Center. He discussed shift work disorders and presented a brief example of a “sleepy firefighter.” He highlighted issues related to airway, trucks, driver’s education, and other contamination training professionals. Later, Dr. Katherine Gundling, UCSF Professor of Allergy and Immunology, shared a memorable video on how to use epi-pen.

For the second day’s final lecture by Dr. Neil Benowitz, a leading expert in the field of tobacco and environmental medicine, he discussed the toxic effects of cigarettes and the potential human toll.

The concluding half day was led by the always-on-point Dr. Howard Maibach, OEM Professor of Dermatology at UCSF, who commanded the audience’s attention with his calm presence, famous how-to brevity in slides, and ability to field the numerous questions posed throughout his interesting talk. World renowned in Occupational Dermatology, Dr. Maibach discussed the toxic effects of fragrances, metals, and other chemicals.

In collaboration with scientists at the National Cancer Institute and in the United States, the UCSF OEM faculty, Stephen Rappaport and Alan Hubbard published their influential work on formaldehyde toxicity in the stem/progenitor cells of Chinese workers in the January 2015 issue of the journal, Carcinogenesis.

New Research from COEIH

COEIH faculty member Martyn Smith and COEIH faculty affiliate Luoping Zhang from the UC Berkeley School of Public Health published an up-to-date review on “Functional genomic screening approaches in mechanistic toxicology and potential future applications of CRISPR-Cas9” in Mutagenesis Review, ahead of print on January 25, 2015. The CRISPR-Cas9 technology, a novel genome editing tool, can be applied to tests of toxicities of occupational chemicals.

“It has been used to identify genes involved in the response to chemical and microbial toxics in several human cell types and could readily be expanded to evaluate the use of large numbers of chemical and microbial toxics,” the study reports. In the future, the innovative technology offers the potential to tailor medical treatments to match an individual’s genetic makeup.

The longitudinal study predicted that after 15 years, the risk of IHD for never-smoking, never-drinking, non-overweight, non-employees was 2.5 percent. For fabricator workers, where the 10th percentile was 0.06 mg/m³, the estimated difference in the risk of IHD was 2.5 percent.

In the smoker worker population, we predicted that 4 percent would have been diagnosed with IHD if they had been exposed at the lowest levels compared to 6.9 percent if exposed at the higher level. So this 2.9 percent absolute increase is actually a 77 percent relative increase. In the fabrication worker population, the 2.5 percent increase is equivalent to a 45 percent relative increase,” reports lead author Daniel Brown, a research data analyst in the field of occupational and environmental health.

Occupational exposure to air pollutants greater than 2.5 microns in diameter (PM2.5) is associated with an increased risk of ischemic heart disease (IHD) among aluminum smelter and fabrication workers, a new study by COEIH researchers at UC Berkeley concludes.

“Our study provides more evidence that there is a causative relationship between inhaling small particulates at levels seen in an occupational environment and the subsequent development of heart disease,” says Brown.

A total of 13,529 workers from 11 aluminum smelter or fabrication plants were followed for the incidence of IHD for more than two years between January 1996 and December 2012, starting two years from their date of hire. The two-year lag allowed researchers to remove pre-existing cases of IHD from the cohort. All participants were enrolled in the company health plan.

Published in the journal, Epidemiology, the study is the first to apply targeted minimization techniques to reduce the field of occupational and environmental health—a doubly robust statistical method of achieving an unbiased estimate of disease and exposure.

Using TMLE, researchers also took into account personal characteristics that change over time, such as smoking and Body Mass Index (BMI) two risk factors for heart disease. The study collected smoking and BMI data at occupational medicine clinics onsite at each facility. The results of the study remained robust to the removal of the “three-stable groups.” Yes, they’re certainly strong predictors of heart disease, but in this setting, they really need to use these newer causal techniques.”

Exposure to Small Particle Air Pollution Linked to Ischemic Heart Disease in Aluminum Workers

Basic findings: workers who get sicker as they get older, possibly due to some of the exposure in the workplace, tend to leave work or selectively reduce their exposure by switching to different jobs,” explains Brown.

“That process makes it difficult to get meaningful estimates of the effect of the exposures that we’re looking at. In order to adjust for that process, we really need to use these newer causal techniques.”

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Before a capacity crowd of 200 at the David Brower Center, COEH Director John Balmes kicked off the 2015 Lela Morris Symposium on ergonomics, health, and workplace design. Held in Berkeley on May 22, 2015, the symposium brought together industry and worker representatives from the United States and around the world. Adding to the faculty and staff in attendance from the three campuses of COEH – UC Berkeley, UCSF, and UC Davis – researchers attended from UCLA, Washington University in Seattle, Ohio State University, the University of Michigan, Northeastern University, and the University of Bologna, Italy.

Balmes opened the symposium by introducing David Rempel, his esteemed colleague of 30 years. Rempel, founder of the University of California Ergonomics Program, exemplifies COEH’s triple mandate of teaching, research, and service, according to Balmes. Many in the packed theater came to honor the legacy of Rempel, now professor emeritus after retiring from the University of Michigan, Northeastern University, and the University of Bologna, Italy.

Symposium Speakers (left to right) David Rempel, Richard Jackson, Francesco Violante, Carisa Harris-Adamson, Andrew Imada, and Deborah Gold.

2015 LELA MORRIS COEH SYMPOSIUM:
NATIONAL PERSPECTIVES ON ERGONOMICS, WORKPLACE DESIGN, AND HEALTH

Switching the lens from national to state measures, Deborah Gold, former deputy chief of Health and Engineering Services at Cal/OSHA, laid out the complexity of extending California’s Safe Patient Handling regulation (AB1136) to long-term care (LTC) facilities. Currently, AB1136 protects workers in acute-care hospitals and excludes LTC facilities.

Musculoskeletal disorders (MSDs) accounted for 35 percent of all injury and illness cases in 2013, reported Gold. Nursing assistants were among the most at risk, with MSD cases accounting for 53 percent of the total cases of injury and illness (BLS – December 16, 2014).

Following a break, Richard Jackson re-energized the theater with his presentation linking the built environment to ergonomics and health. Jackson, former director of COEH in southern California and a professor in the UCLA Fielding School of Public Health, relayed his experience in the trenches during his leadership tenure at the CDC National Center for Environmental Health and California Department of Public Health.

Wrapping up the day’s presentations, Carisa Harris-Adamson (UC Berkeley and Samuel Merritt University) and Jack Demmerlein from Northeastern University presented results of their U.S. studies on preventing hand and arm injuries, improving the safety culture through workplace programs.

Two panel discussions during the symposium synthesized each presenter’s perspective on ergonomics, workplace design, and health. Guest expert Francesco Violante, Director of the Occupational Medicine Department at the University of Bologna, moderated the first panel, and John Balmes, former president of the Human Factors and Ergonomics Society, moderated the second. Imada asked audience member Meg Honan, a senior ergonomics program manager at Genentech and graduate of the UC Berkeley Ergonomics Program, her unscripted advice on effecting change in workplace health.

“I believe that if you give employers a pathway to be successful when you are proposing programs to improve ergonomics, you can exercise their values and create a balance with the programs they may not want to come along,” said Honan. “You have to be persistent and give them a path forward.”

Balmes wrapped up the symposium with an open invitation to an after-party featuring Rempel’s retirement. Family, colleagues, and graduate students at the party waited for a turn to toast Rempel’s lifelong contributions as a leader, scientist, entrepreneur, mentor, and friend.

COEH Profile: Dan Odell
UC Berkeley alumnus Dan Odell, ’04, began a new position in April as staff scientist for Google X, a secretive secret campus of Google located in Mountain View, California. The projects at Google X are hush hush, but there’s no secret why Odell fits in with a team best known for pushing the envelope at one of the world’s most successful global technology companies.

Brown’s paper, “Occupational exposure to PM, and incidence of ischemic heart disease: Longitudinal targeted minimum loss based estimation,” has been published by the journal, Epidemiology. The study provides evidence that there is a causal relationship between inhaling small particulate at levels seen in an occupational environment and the subsequent development of heart disease. See the article on Brown’s research in this isue of the Bridges Newsletter on page 7.

Asked what he likes most about his new job – Odell says his coworkers tops the list. “So far it has been the people – a really great team of super smart, interesting people. I definitely get caught up in their energy in a positive way,” adds Odell. “Some of the futuristic projects, or ‘Moonshots,’ to come out of Google X include a self-driving car and Google Glass, the voice command, wearable technology that places data within eyesight.”

Not many people have Odell’s background in product design and ergonomics, which are unique skills sets that he brings to the Google X team. Odell earned his PhD at UC Berkeley in Mechanical Engineering with a major in Design. It was in Professor Paul Wright’s mechanical engineering lab that Odell’s research began to turn toward new types of computer input devices. Odell says, “the work turned from a question of, how do you build this device, to the
human element - how do you make it better for people? During this time, Odell began engaging Ben Rempel to learn about ergonomics. Rempel sat down on October 1, 2014, following a 25-year career as the director of the University of California Ergonomics Program. He remains a professor emeritus of Bioengineering at UC Berkeley and will continue his affiliation with COEH by managing ongoing projects and assisting in the transition to a new director of the Ergonomics Program.

Rempel’s landmark work focuses on the etiology and prevention of work-related upper extremity disorders through the design of workplace tools and tasks. 

In addition to Rempel, Odell says that Professor Rempel was pretty important to his development of an overhead drill rig and used in the construction industry. Both devices reduce workers’ exposure to physical stressors and silica dust.

Rempel earned his MD from UCSF in 1962, his MPH in Epidemiology from UC Berkeley in 1961, and a BA in Engineering from UC San Diego in 1977. He is board certified in internal medicine and occupational medicine and is named the Senior Professional Educator. In addition to 17 book chapters, he has published more than 140 peer-reviewed scientific papers.

Rempel continues to serve on the National Research Council’s Board on Human Systems Integration. He will continue to serve on the American Conference of Governmental Industrial Hygienists (ACGIH) Physical Agents Committee and the American College of Occupational and Environmental Medicine (ACOEM) Clinical Practice Guidelines Committee.

COEH faculty Alan Buckpitt announced his retirement from UC Davis. He will continue to serve as a professor emeritus of Molecular Biosciences in the UC Davis School of Veterinary Medicine. Buckpitt’s 35-year career at the University of California included five years at UC Irvine before joining the faculty at UC Davis in 1985. He was a key leader in the development of Chemical Pharmacology at the National Heart, Lung, and Blood Institute and subsequently in the Laboratory of Clinical Pharmacology at the National Institutes of Health.

Buckpitt’s laboratory focuses on the mechanism of action of envenomations and environmental chemicals to produce tissue-specific toxicity in the respiratory system. He taught in the pharmacology/toxicology graduate program, including a specialized course in drug metabolism. He won the Achievement Award from the Society of Toxicology in 1985.

Buckpitt earned his PhD and MS in Pharmacology from Indiana University in Bloomington and an MS in Chemistry from the College of William and Mary in Williamsburg, VA.

In April, 2015, the journal PLOS ONE published his co-authored paper, “Simultaneous Quantification of Multiple Polycyclic Aromatic Hydrocarbons and Naphthalene Metabolites by Liquid Chromatography Tandem Mass Spectrometry.”

One of the lessons I learned early on is to listen. I did home care for many years at the beginning, and so, I was working with patients who were case managing patients, you know, with their caregivers, but I was also a director of a home care agency as well. The nursing care with patients who are case managing patients, you have to learn to listen before you make decisions.

Then, with Catholic Healthcare West, now Dignity Health, I did performance improvement for seven years. Within the hospital system, you’re working with professionals with all sorts of different educational backgrounds and specialty areas. Learning to work with people who view things differently was a key learning experience. Now I oversee not only a school of nursing, but a school of social work and a public health department with work with professionals who have different perspectives on health and the environment. Those early lessons in performance improvement serve me well.

I remember the research that Marion Gillen conducted several years ago on occupational safety, particularly among construction workers. We’ve had small incidences lately on Oahu where construction workers have been injured. They’re either not using the safety equipment or they’re not using it properly. In Kakako, near where I live, medics have constructed six high rises in the last three to four years and there are another eight or nine more under construction. My concern is the worker safety is of primary importance in the construction industry in Hawaii.

The other issue unique to Hawaii is that, unlike many other states, there are no established standards for auto mobiles. There’s been a lot of research on the health effects of inhaling exhaust particles, especially for those who live next to heavily trafficked roadways. Research needs to be done to ascertain the health effects on local population of pollution from cars and trucks. In Hawaii. Results of studies done on the mainland may not be transferable to Hawaii given the unique atmospheric conditions of living on an island.

On environmental health, we’re facing a lot of the same issues as many coastal communities globally. We also have severe water quality concerns because of run-off from road surfaces and sewage. Both water quality and marine life are under threat in some parts of the state and the threats to tourism on reef integrity. Since a major food source for the state is fish and other seafood, assuring good water quality is a key concern and sustaining a healthy ecosystem is important to the health of the state’s residents.

I think the key is that you have to engage with the community. The key point is to identify faculty who are interested in these issues and mentor them to develop research specific to Hawaii. What is really profound to me is the commitment that faculty has to the communities on this island, and how they actively engage with those communities. I think there are great opportunities to work with local communities to understand their occupational and environmental health concerns, and make a positive impact on their quality of life.

As Dean, do you have any advice for students in the field of occupational and environmental health?

Students need to understand that it’s engagement with local communities that is going to have the largest impact. When the community owns the problems and is involved in finding the solution, you’re going to have a lasting impact. That is the most important thing I tell all of my students.
WCAHS and UCD Blum Center Cosponsor Ag Health and Safety Projects in Developing Countries

By Andrea Sargas, UC Davis

The Western Center for Agricultural Health and Safety (WCAHS) is proud to partner with the UC Davis Blum Center for Developing Economies to help impoverished communities around the world improve their agricultural health and safety. WCAHS, headed by UC Davis Department of Community Health and Human Development professor Dr. John Schlenker, and the Blum Center are excited to announce joint funding of six UC Davis undergraduate students and eight UC Davis graduate students to conduct agriculture health and safety related projects this summer both in the United States and abroad in conjunction with a non-profit or agency.

The selected undergraduate projects are located in Latin America. Trent McGowan and Ariel Chavez will work with Engineers Without Borders to help improve water quality and catchment in Chirinos, Peru, a small agricultural town that has outgrown its current water supply system. Alex Thornton-Dunwoody will help build a low-cost pollen dryer for Colombian beekeepers to improve bee pollen storage. Colombia is one of the highest pollen producing regions in the world, and the project will help beekeepers improve their income and dramatically improve pollen quality. Finally, Tracie Dang, Elspeth Fullerton and Greta Soos will travel to Sabana Grande, Nicaragua, to help reduce malnutrition in cows by developing feed concentrates to boost poultry output. Such research includes record keeping, night housing, disease prevention. Lastly, Wendi Jackson and Jake Pry will study the role of pesticides and alcohol consumption in a kidney disease epidemic around the rural poor in Sri Lanka. The epidemic is especially prevalent in farming regions of North Central Region of the country.

Finally, Tracie Dang, Elspeth Fullerton, Lisandra Ochoa and Kayla Carlson will also be taking a One Health approach to community development in Sabana Grande, Nicaragua. Their goal is to also be taking a One Health approach to community development in Sabana Grande, Nicaragua.

Garrett Brown, coordinator of the Maquiladora Health and Safety Network and COEHS Adviser to the Accord, presented an update on the Bangladesh Accord for Fire and Building Safety on March 31, 2015, at the UCS CIBER Center for Latin American Studies.

The Accord is a legally binding agreement between 250 clothing brands and two international trade unions and their local Bangladeshi affiliates that addresses health and safety hazards in Bangladesh’s garment industry. It began after a series of fatal disasters, most notably, the Rana Plaza building collapse on the morning of April 24, 2013, which killed 1,100 workers and disabled hundreds more. Brands pay a fee to participate in the Accord, supplying crucial funds to improve factory working conditions in Bangladesh.

The Accord contracted independent, international health and safety professionals to conduct initial inspections of 1,000 Bangladeshi factories to review fire, electrical, and building safety. It also established a staff of Bangladeshi engineers to do follow-up inspections to verify that corrections have been made. Brands are legally responsible to pay for mandatory repairs if factory owners are unable to.

Funded by the Accord, the LOHP Program Coordinator Robin Dewey and Valeria Brown in October, 2014, to provide two occupational safety and health training sessions. The first was a two-day training course conducted for the Accord’s 12 case handlers and seven engineers.

The Bangladesh Accord Brings Health & Safety to South Asia

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AWARDS AND ANNOUNCEMENTS

Fadi Fathallah
Director of New COEH Agriculture Safety and Health Training Program

COEH faculty Fadi Fathallah is the director of a new education and research program designed to train PhD students in agricultural safety and health (ASH). The US Department of Agriculture (USDA) awarded this initiative, offered at UC Davis, will train doctoral students who will develop interdisciplinary skills in ASH research and training. The program is designed to help fill this void by educating doctoral professionals and leaders in who will play a role in the future of ASH research and training.

ILWU Local 6 Honors LOHP for Health and Safety Training

International Longshore and Warehouse Union Local (ILWU) 6 recognized Labor Occupational Health Program (LOHP) staff Suzanne Teran, Dinorah Barrera Antonio, and Valeria Velazquez (formerly with LOHP) for providing health and safety training to almost 250 workers in the recycling industry.

Kirk Smith Receives 2014 Haagen-Smit Clean Air Award

On June 25, the California Air Resources Board (CARB) honored COEH faculty Kirk Smith with the 2014 Haagen-Smit Clean Air award. CARB gives the award annually to individuals who have made significant lifetime contributions toward improving air quality and climate change, science, technology, and policy, and furthering the protection of public health.

“The Haagen-Smit Award is our way of honoring these individuals who have demonstrated a sustained commitment to protecting public health throughout their long and distinguished careers,” said CARB Chairman Mary D. Nichols. Other winners in 2014 include Donald Blake, professor of chemistry at UC Irvine and John Wall, Vice President and Chief Technical Officer, Cummins Inc.

Hundreds of workers, family members, and supporters attended the special event in March 2015 organized to celebrate the winning of a fair wage and benefit standard in Alameda County recycling facilities represented by ILWU Local 6.

While presenting a campaign commemorative poster to LOHP staff, a recycling worker described the risks they face on the job, including dust, needles, and other items that are unexpected in the line, as well as ergonomic hazards. She talked about the way the trainings helped workers take action when they see a problem, such as using the conveyor belt’s emergency stop button to prevent injuries while sorting.

In their second year of training workers in Fremont, Oakland, and San Leandro, CA, LOHP added new curriculum materials to address confined space hazards and heat illness prevention. Also in year two, Teran and her colleagues offered additional training of leadership training at the facilities represented by ILWU Local 6.

“The idea was to train health and safety leaders to be resources within their facility in addition to integrating health and safety into the leadership role that they already played with the union,” says Teran.

Fremont Mayor Bill Harrison and city council members from Oakland attended the celebration to lend community support to those striving to improve conditions in Alameda County’s recycling industry.

Sarah Daniels Wins Fellowship from Soroptimist International of the Americas

UC Berkeley PhD candidate Sarah Daniels received a Founder Region Fellowship (FRF) from Soroptimist International of the Americas. FRF awards one-year grants to female scholars in the final phase of their doctoral degree.

The awards for academic excellence are presented to students from the UC Berkeley Environmental Health Sciences (EHS) programs who demonstrate an interest in the industrial hygiene profession.

Sarah Daniels (right) and Annice Raval (left) received the Soroptimist International of the Americas Fellowship.

Blythe completed her MPH in the Industrial Hygiene program within the Division of Environmental Health Sciences in May 2015. Recently a graduate assistant at LOHP, she began her new career in August as an industrial hygienist at Intel in Hillsboro, Oregon. Raval is in her first year of EHS programs in the Global Health and Environment and Industrial Hygiene programs, and she will graduate in May 2016.

AIHA-NCS presented the awards to Blythe and Raval during its Student and Vendor Night held in Berkeley in March 2015.

American Industrial Hygiene Association Honors Kathleen Navarro

Navarro was honored by the American Industrial Hygiene Association (AIHA) for her contributions to the field of industrial hygiene and her work with the United Steelworkers World Health, Safety, and Environment (USW HSE) conference. In March, the USW HSE presents the AIHA National Student Poster Competition to students from outside the United States who work in the field. Navarro was honored for her work with the American Industrial Hygiene Association, which she has been a member of for over 20 years.

Kathleen Navarro at AIHA-NCS Student Poster Competition.

AIHA-NCS Honors Blythe and Raval

Rachel Blythe received the 2015 Tebbens Student Award from the Northern California Section of the American Industrial Hygiene Association (AIHA-NCS). The award pays tribute to Dr. Bernard D. Tebbens, a former professor of industrial hygiene at UC Berkeley. Blythe completed her MPH in the Industrial Hygiene program within the Division of Environmental Health Sciences in May 2015. Recently a graduate assistant at LOHP, she began her new career in August as an industrial hygienist at Intel in Hillsboro, Oregon. Raval is in her first year of EHS programs in the Global Health and Environment and Industrial Hygiene programs, and she will graduate in May 2016.

The award recognizes individuals who have demonstrated an interest in the industrial hygiene profession.

American Conference of Governmental Industrial Hygienists Honors Kathleen Navarro

Kathleen Navarro received the AIHA-NCS Honors 2015 William Steiger Memorial award at the AIHA Conference in May 30 to June 4, 2015, in Salt Lake City, Utah. The award recognizes individuals from the social or political whose efforts have contributed to advancements in occupational safety and health.

Navarro’s poster titled, “Gas-Phase Polyolycyclic Aromatic Hydrocarbon Exposure to Prescribed Fire: A Case Study,” was presented at the conference.

Kathleen Navarro at the American Conference of Governmental Industrial Hygienists (ACGIH) Annual Conference.

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Teens Monitor Neighborhood Air Quality in San Joaquin Valley

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science program are placed in a project where they gain hands-on field experience. Exclusively juniors and seniors, they spend half a day at their home school and half a day at CART. The four students who participated in the CHAPS air monitoring project came from different neighborhoods and socio-economic backgrounds, affording a diverse set of transit data for the project.

Monday through Friday, the teens turned on the monitoring equipment when they left the house to measure the temporal and spatial variability of their PAH exposure while in transit. The real-time monitors took samples in 10 second intervals while the teens traveled to their home school in the morning, then on their mid-day bus ride to CART, and later back to their home school, and finally, on their trip back home.

Very few of these PAS 2000 CE monitors exist worldwide, and they are expensive. “I have to admit I was really worried,” said Mann. Fortunately, the teens cared for the equipment without incident, turning the monitors on and off throughout the day to save battery life.

Later, the CHAPS team helped the students download and analyze their monitoring data. Then, they compared one another’s PAH concentrations during the same time periods and hypothesized why concentrations varied by route taken and mode of transportation. “The excitement of them being able to start understanding concepts about air pollution and health and how much it can vary from place to place,” made an impression on Mann. When students presented their preliminary results to CART board members in February and to CART students and teachers in May, 2015, it generated a great deal of enthusiasm. “All in all, this was a win-win project,” added Saklar.

The CHAPS study receives funding from the National Institute for Environmental Health Sciences and the U.S. Environmental Protection Agency. Principal Investigators include COEH faculty Katharine Hammond, professor of Environmental Health Sciences, UC Berkeley School of Public Health, and John Balmes, director of COEH. Gary Shaw, professor of Pediatrics in the School of Medicine at Stanford, is also a Principal Investigator. Jaymin Kwon, professor in the Department of Public Health at Fresno State, was a partner in CART’s community outreach project.

For more information on CHAPS, visit: http://chaps.berkeley.edu.

COEH Retirements

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courses in Occupational Safety and the Professional Practice of Industrial Hygiene. Prior to her role of director of the COEH Continuing Education Program, she served as Assistant Director of Technical Services of the Labor Occupational Health Program.

She was the Editor-in-Chief of “Fundamentals of Industrial Hygiene,” 3rd, 4th, 5th, and 6th Editions with COEH Deputy Director Patricia Quinlan. The book is considered an important reference tool for practicing safety and industrial hygiene professionals. She received her BA degree from the University of Arizona in Tucson, Arizona in 1973 and her MPH degree in Industrial Hygiene from the University of Illinois at the Medical Center in Chicago, Illinois in 1981.