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Western Center for Agricultural Health and Safety • University of California, Davis

## California AgrAbility Project gets four-year funding & new director

WCAHS Investigator Fadi Fathallah received a four-year grant to fund California AgrAbility, a program that improves the lives of people with disabilities by helping them to remain working in agriculture. The program offers bilingual technical assistance, rehabilitation, education, referrals and advocacy to workers with disabilities along with its partner AbilityTools Assistive Technology Network.

“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.

New technologies are also invented. For example, to bring nursery propagation



California AgrAbility Program's mission is to promote independence in farming and rural living for people with severe injuries and disabilities and illnesses. (Photo courtesy of California AgrAbility).

workers back from disability due to repetitive strain injury of the hand, wrist and arm, the University of California Agricultural Ergonomics Research Center developed air-powered shears, funded by a grant from the National Institute for Occupational Safety and Health.

Now, instead of workers hand-cutting an average of 5,000 stems a day for plant propagation, the “Air Klipper” cuts the plant for them,

*AgrAbility continued on page 2*

## WCAHS partners with UC Davis EHS Center to fund pilot projects: Concept letters due Dec. 10

WCAHS is soliciting pilot project proposals as part of its partnership with the UC Davis Environmental Health Sciences (EHS) Center at UC Davis. Short-term awards of up to \$30,000 are available for any faculty member, or equivalent title with principal investigator status. Priority is given to junior investigators to establish research in environmental health science (EHS), or to more established investigators who are either new to EHS or are exploring innovative new directions. A concept letter describing the project is due December 10, 2015.

Projects eligible for WCAHS co-funding will include farmers, farmworkers, or farm communities in the Central Valley of California as populations of interest. Examples of relevant research topics include, but are not limited to: musculoskeletal injury and ergonomics; neurotoxicity and pesticides; respiratory diseases; industrial hygiene and exposure assessment; socioeconomic impacts on health behaviors; environmental risk assessments; costs and financial effects of adverse health outcomes. Applications that incorporate the effects of climate change (e.g., water quality and drought) on human health and exposures to environmental chemicals and pollutants that affect human health are especially encouraged.

*Pilot Projects continued on 3*

# Farm employer labor specialist gives seminar on health and safety

C. Bryan Little, a WCAHS External Advisory Board member and labor-affairs specialist in both government and agriculture, gave a talk on “Important Issues for Health and Safety on the Farm” for the November WCAHS monthly seminar series. Little is the chief



C. Bryan Little

operating officer of Farm Employers Labor Service in Sacramento. He also serves as director of labor affairs for the California Farm Bureau Federation, representing members on legislative, congressional and regulatory issues involving immigration and labor policy.

Admitting that he “takes the point of view of the employer,” Little described how agriculture is one of the most hazardous occupations. Farmers are innovative, though, in preventing injuries and complying with government regulations. For example, when faced with the regulation of protecting their employees against heat illness, many farmers designed and built shaded table structures that can be hauled by trailer to work sites. Often these trailers are towed in tandem with mandatory field sanitation facilities,

and tarps are added to provide all-day shade as the sun shifts in the sky.

While employers try their best to protect their workers, human mistakes and errors are inevitable. For example, in the busy harvest season with long hours, the person responsible for transporting the shade structure may get incorrect information about the field location or time to be there. The key is to consistently work to avoid these mishaps and take them seriously, especially the “near miss,” when a serious accident almost happens but doesn’t. Little stressed that as the rate of “near misses” increases, the likelihood of injury or fatality increases, and that is the time to take corrective action – even if it means using progressive discipline ending in termination to get worker safety compliance.

Little relayed how often farmers and farmworkers have a long history of working together that may span multi-generations. The worst day a farm could have is when one of the workers in the close-knit farming community gets hurt or dies, and everyone knows them and their family. This is especially true when the accident could have been prevented. Little believes consistent training (over and over again), worker education, good supervisors and stories are key to motivating continued and improved health and safety on the farm.

## AgCenter readies itself for renewal

WCAHS is preparing to submit its grant renewal to the National Institute for Occupational Safety and Health (NIOSH) on December 17. Five projects are being proposed for the renewal and include the areas of zoonotic pathogens, ergonomics, agriculture air pollution, heat illness and pesticide exposure. In addition, the new guidelines allocate more funding to outreach activities, which would allow WCAHS to expand its already established outreach training programs on agriculture health and safety and to disseminate the project findings to stakeholders. Each project in the proposal has carefully incorporated an outreach component to move the “research to practice,” a major priority of NIOSH. WCAHS has been funded for 25 years, and we look forward to continuing our work for another five years.

## AgrAbility *continued from page 1*

virtually eliminating the need for repetitively and forcefully gripping manual sheers. By reducing hand and arm fatigue, worker productivity is increased.

Over the past years, California AgrAbility has targeted its resources toward injured U.S. veterans. Working with a partner organization, the Farmer-Veteran Coalition,

they encourage veterans re-entering the workforce to consider farming as a viable career alternative. “A lot of them have a misconception that they have lost their livelihood due to an amputation or injury. We reach out to them and provide resources to help them adapt,” says Fathallah.

Older adults, minorities, and the medically underserved

are the at-risk populations assisted by California AgrAbility. Due to language or cultural barriers, many of these workers have difficulty locating health providers, filling out medical forms and understanding directions on medicines. Too often, they lack services to manage chronic health conditions, including rehabilitation and counseling. In addition to reaching out to these workers

through workshops, webinars and community support systems, California AgrAbility networks with affiliated non-profits and government agencies across the state. For more information on California AgrAbility, visit: <http://calagrability.ucdavis.edu>.

Originally published by COEH Bridges newsletter, Summer 2015, <http://coeh.berkeley.edu/bridges/Summer2015/AgrAbility.html>

## Pilot Projects *continued from page 1*

Projects may be general science research or community engaged research (reflect the needs and priorities of communities affected by environmental hazards and must promote mutual learning between researchers and community residents and organizations).

Only projects approved at the concept letter stage may move forward to full proposals, which are due January 19, 2016. A concept letter form and expanded instructions are posted on the UC Davis Environmental Health Sciences Center web site ([ehscc.ucdavis.edu](http://ehscc.ucdavis.edu)) under “Programs.”

**Priority areas:** For the 2016 cycle, applications that address links between chemical exposures and human health, with a focus on exposures and outcomes of relevance to the Central Valley of California are especially encouraged. In particular, proposals that incorporate the effects of climate change (e.g., water quality and air pollution) on human health, and exposures to environmental chemicals and pollutants that affect human health, are especially encouraged are desired. Community outreach and engagement is a significant goal of the EHS Center, and applicants are required to include a plan for community outreach and engagement for all proposals. Suggestions for community based research topics that are responsive to this call can be found in the expanded instructions. For this call, we are soliciting two different types of applications:

**Type 1 proposals** are for general pilot projects that are responsive to the call and should request budgets with an upper limit of \$30,000 direct costs for the duration of one year, starting April 1, 2016. It is anticipated that 5 to 6 Type 1 proposals will be awarded.

**Type 2 proposals** will be for pilot projects with significant community engagement at all stages, based on suggested topics (see application instructions). Type 2 project proposals

should request budgets with an upper limit of \$30,000 direct costs per year for the duration of two years, starting April 1, 2016. It is anticipated that one Type 2 project will be funded. For Type 2 proposals, a plan for community outreach and engagement will be central to the project and must be included at every stage including concept development and proposal preparation, through project implementation and dissemination. Please see suggested project areas in the expanded application instructions.

**Additional Information:** The EHS Center specifically encourages applications that form scientific partnerships; for example, applications that foster collaborations across schools and colleges and areas of expertise on the UC Davis campus or that incorporate collaborations within the California Central Valley. A mentor in the EHS Core Center will be assigned to applications from early stage investigators (ESI) or investigators new to EHS to assist with preparation of a competitive proposal. ESI will receive ongoing assistance from the Career Development Core, if selected for funding. Grantees must acknowledge the Center grant in work resulting from supported studies, and provide progress reports and updates. For projects involving human or animal subjects, no award will be issued until IRB or IACUC approval has been received and the NIEHS has authorized allocation of funds. Applications will be internally triaged for responsiveness to the Request for Proposals and compliance with the above requirements and formats. Final funding decisions will be made by the Center’s Funding Council. **Please send a PDF version of the application by midnight Pacific time on Dec. 10** to: [lsvanwinkle@ucdavis.edu](mailto:lsvanwinkle@ucdavis.edu), and [dmbrrose@ucdavis.edu](mailto:dmbrrose@ucdavis.edu).

For questions, please contact Dr. Laura S. Van Winkle ([lsvanwinkle@ucdavis.edu](mailto:lsvanwinkle@ucdavis.edu)), or Dr. Judy Van de Water, ([javandewater@ucdavis.edu](mailto:javandewater@ucdavis.edu)).

**GIFTS TO WCAHS** help advance science and training to promote farmworker health and safety and disseminate knowledge to our stakeholders. If you would like to donate, please send a check to: Western Center for Agricultural Health and Safety, Attn: Sherri Gallagher <[slgallegher@ucdavis.edu](mailto:slgallegher@ucdavis.edu)>, University of California, One Shields Ave., Davis, CA 95616-8757

## NIOSH features WCAHS investigator for impact story

This past May, WCAHS Investigator Barry Wilson was honored and highlighted for his work on detecting pesticide exposure in an NIOSH impact sheet (#2105-182). Impact sheets communicate the relevancy of NIOSH funded work to industry, labor, academic, government, and non-government stakeholders.



Barry Wilson

Dr. Wilson, who died at age 82 on March 28, 2014, improved pesticide testing methods and regulations to protect agricultural workers. If not handled properly, many pesticides can cause serious harm to the nervous system by decreasing levels of cholinesterase (ChE), an enzyme vital for nerves and muscles to work. Early detection of low ChE levels and prompt treatment can help reduce the severity of the symptoms.

Dr. Wilson's research helped standardize ChE measurements. In California, employers of pesticide mixers, loaders and applicators are required to ensure each employee who regularly handles pesticides has their ChE level measured within three days after each 30-day work period. In 2000, the technique developed by WCAHS for measuring ChE became mandatory in laboratories in California.

## Calendar

Monday, Dec. 7, 2015, 4:00 – 5:00 p.m., CHE, Old Davis Road, Davis “Robot Automation: Mechanization in Specialty Crops” **Nathan Dorn**, Reiter Affiliated Company

Monday, Feb. 1, 4:00 – 5:00 p.m., CHE, Old Davis Road, Davis “Risk & Safety Programs at UC Agriculture & Natural Resources,” **Brian Oatman**, Director of Risk & Safety Services, Division of Agriculture and Natural Resources

Monday, March 7, 4:00 – 5:00 p.m., CHE, Old Davis Road, Davis “Economics of Healthier Farm Employees: Framework for Assessing Impacts of Inventions for Berry Workers.” **Dan Sumner, PhD**, Director of the UC Davis Agricultural Issues Center

Monday, April 4, 4:00 – 5:00 p.m., CHE, Old Davis Road, Davis “Environmental Justice and Cumulative Impacts in Communities: The Cal Enviro Screen Model” **Gina Solomon MD, MPH**, California Environmental Protection Agency

Monday, May 6, 4:00 – 5:00 p.m., CHE, Old Davis Road, Davis “Agricultural Health and Safety from a Farmer's Perspective,” **Patty Rominger**, Worker Safety Representative for Rominger Brothers Farms

Monday, June 6, 4:00 – 5:00 p.m., CHE, Old Davis Road, Davis “Health and Wellness in the Fields: Improving the Lives of Those We Serve,” **Rebeca Guerra**, Chief Monitor Advocate, California Employment Development Department



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