

# AgHealth News

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

## Twenty years of working for a healthier, safer agricultural workplace

Marc B. Schenker, M.D., M.P.H.

This year marks the 20<sup>th</sup> anniversary of the Western Center for Agricultural Health and Safety at Davis. It has been a remarkable time with many accomplishments, and at the same time there is still much work to be done. I am mostly grateful and honored to have led this center at such an outstanding institution with so many talented collaborators and staff.

California is, of course, the number one agricultural state in the country, and UC Davis is the premier agricultural university in that state. Indeed, California is arguably the leading agricultural state in the world, and UC Davis the leading agricultural university in the world. But the serendipity of the ag center's accomplishments was to bring together the occupational health and preventive medicine strengths of the UC Davis School of Medicine with the many colleges at Davis that contribute to improving health, including agriculture, veterinary medicine, engineering, law and biological sciences. This merging of enormous and diverse strengths and disciplines at Davis has been the source of the ag center's energy, creativity and accomplishment.

I am reminded of Bob Spear's very early help to define the goals and resources for a center at Davis. I also recall the very first conference at Iowa City that led to the congressional funding for the NIOSH agricultural health efforts. At that meeting, there were only two representatives from California, Wendell Kilgore and myself. This reflected the paucity



*Richard Molinar (left), a farm advisor in Fresno County, and Desmond Jolly, then-director of the Small Farm Center at UC Davis, discuss their outreach efforts involving pesticide education of recent immigrants at a noon seminar in the Spring of 1999.*

of Californians working in this area in the 1980s, and the recognition of this field in other states. Many other people played an important role in the early years of the center. Don Villarejo was a collaborator in the 1981 proposal, providing invaluable assistance in working with farm worker communities to address their unique agricultural health and safety needs. Pat O'Connor-Marer led the very successful outreach efforts of the center, focusing on improving pesticide health and safety. John Miles was also a collaborator in the first center proposal, bringing his engineering expertise and farming knowledge to solve so many ergonomic and injury problems in agriculture.

Space does not allow me to list even a small fraction of the many collaborators who have been a part of the center. And then there are the many staff who have contributed to this effort over the years, culminating

with our current center manager extraordinaire, Sandra Freeland. Instead, I'd like to highlight what I think are some of the core strengths and areas of accomplishment of the Western Center for Agricultural Health and Safety.

First, the center has provided leadership and important insights into reducing illness and injury in labor-intensive agriculture as practiced in Western states, and particularly in addressing the needs and approaches to improving the health of hired farm workers. Second, the center has been at the forefront of engineering solutions to improving ag health and safety. From the invention of the tractor roll-over protection structure at UC Davis (long before there was an ag center) to improved ergonomics and ladder design, the center has helped make important contributions. Third, the center has supported efforts to reduce pesticide illnesses, from improved biomarkers to toxicological studies to epidemiologic studies and field interventions. Fourth, center investigators have conducted a wide range of studies on respiratory hazards in Western agriculture, includ-

*Continued on page 2*



*In November 2002, Patrick O'Connor-Marer (left), then-outreach coordinator for the ag center, discusses university/industry research partnerships with Dan Hair, then-senior vice president and national director for safety and health at Zenith Insurance Co.*

# Western Center for Ag Health and Safety celebrates its 20th anniversary

By Francesca Perrone

In 1990, the National Institute for Occupational Safety and Health (NIOSH) established the Agricultural Health and Safety Center at Davis—later renamed the Western Center for Agricultural Health and Safety (WCAHS)—along with its sister center, the Great Plains Center for Agricultural Health at the University of Iowa. Eight similar centers followed to collaborate in research and outreach, and to serve as liaisons between their local agricultural community members and governmental organizations. Today NIOSH, under the CDC, continues to fund a total of eight centers.



Though California is the leading agricultural state in the country, it is unique in many of the health issues that affect its agricultural populations. For this reason, a research team is imperative in the western states in order to head studies to combat these issues. As founder and director of the center, Marc Schenker, M.D., MPH, leads a team of investigators in collaboration with the UC Davis Schools of Medicine, Veterinary Medicine, Department of Public Health Sciences, College of Agricultural and Environmental Sciences and the College of Engineering.

Current studies include research on reducing heat-related illness in agricultural workers, producing more efficient pesticide exposure tests, finding new methods to determine damage caused by airborne pollutants, identifying health risks of farm workers and their families, and decreasing the risk of injury of workers by engineering projects such as optimum ladder rung spacing and lower back weight-transfer devices.

In addition, WCAHS joined forces with the Southeast Agricultural Center at the University of Kentucky to participate in the National Tractor Safety Project and ran a pilot of its social marketing program in local Northern California counties. This trial helped to develop new partnerships and gave rise to new ideas for involving the community in promoting tractor safety.

The collaboration with the Southeast Ag Center is a continual project that aims to promote tractor safety through trainings and other educational and outreach opportunities throughout the country.

WCAHS is also committed to transferring research findings into practice. The Community Outreach for Research and Education (CORE) was established to prevent and reduce illness and injuries in agricultural populations.

Current projects include using agricultural community leaders, “promotores,” to disseminate information on how to decrease and prevent injury and health problems, and continuing cooperation in the implementation of the Worker Occupational Safety and

Health Training and Education Program (WOSHTEP), a statewide strategy to decrease the instances of occupational illness and injury in California.

In addition, monthly seminars open to the public are a regular feature of the Center, as well as a quarterly newsletter *AgHealth News*, which informs subscribers—especially those involved in agriculture and agricultural research—of ongoing research, findings and events organized by WCAHS. *AgHealth News* and podcasts of the seminars are featured on the WCAHS Web site, along with a database of published articles by the investigators at WCAHS.

To commemorate the Western Ag Center’s 20th anniversary, a reception will be held on Tuesday, June 8, from 4 to 6 p.m., in the courtyard of the Robert Mondavi Institute for Wine and Food Science.

The reception celebrates 20 years of advancing research and education for safety and health in agriculture and will feature keynote speaker Don Villarejo, the founding director of the California Institute for Rural Sciences. His talk is titled “Our 21st Century Challenge: Farmers, Workers and the Community of Scholars.”

## Healthier, safer workplace *continued*

ing interventions to increase awareness of respiratory hazards and to reduce their occurrence.

Many new challenges exist. Climate change is contributing to increased heat stress among agricultural workers. Biological agents represent a risk to workers and consumers alike. Larger farms and increased mechanization present new hazards to farmers and farm workers. Immigrant, hired farm workers continue to face unique risks because of their poverty, environmental hazards and precarious working conditions. I look forward to working with the many collaborators at UC Davis and elsewhere who are working on solutions to these challenges. It has been a productive 20 years, and the fu-

ture holds the promise of further successes in our core mission.

Finally, a special thanks is owed to the National Institute for Occupational Health and Safety (NIOSH). NIOSH has provided the core funding for the center over these 20 years, and has been steadfast in its commitment to improving health and safety in agriculture. From the early leadership of J. Donald Millar (who famously noted that a tractor without ROPS is an “occupational obscenity”) through the directorship of Linda Rosenstock to the current leadership of John Howard, NIOSH has provided support and leadership in adding agriculture to the workplaces benefiting from their support.



*Ag Center Director Marc Schenker (standing) and other Center investigators met at the UC Davis Alumni and Visitors Center with Cooperative Extension Farm Advisors in the summer of 1998 to establish a collaborative working relationship.*



# Healthy steps in lowering rates of obesity and diabetes in farm workers

By Diane Mitchell

The Migration and Health Research Center (MAHRC) and Reiter Affiliated Companies (RAC) have partnered to evaluate an intervention program to reduce obesity and ultimately reduce the occurrence of Type II diabetes in Latino farm workers. Latino communities in California have higher rates of obesity and Diabetes Mellitus than their Caucasian and Asian neighbors.

The Pasos Saludables (Healthy Steps) intervention study is enrolling participants aged 18-50 who work for RAC and are also members of their low-cost health plan and clinics. A total of 300 men and women will be enrolled from two of the areas where the company has berry-growing fields – Oxnard and Watsonville. Two hundred people will participate in a 10-week intervention program consisting of interactive discussions and education about nutrition, exercise, weight management and diabetes. The remaining 100 (50 at each site) will be controls for the study – they will go through a baseline and final evaluation and questionnaire, but not receive the intervention program at this time (if the intervention is successful, they will be able to participate in it after this initial evaluation).

Pasos Saludables encourages participants to drink more water instead of sugared or other high-caloric beverages, and to eat more fruits and vegetables. In addition, enjoyable ways of increasing physical activity are emphasized, as is making exercise a social event. The program intends to help people understand what weight range is healthy for them as individuals and other members of their families, how to keep tabs on their progress, and will emphasize the importance of social and family support to achieve and maintain their goals. The intervention program has been adapted for this immigrant population from three other sources: The Mexican Government's 'Cinco Pasos' (five Steps) for prevention of obesity, and two other programs from

the National Institute of Health: 'Salud para su Corazon' and the 'Road to Health' (National Heart, Lung & Blood Institute). Susana Matias, Ph.D., has designed the evaluation study; Teresa Andrews, M.S., has composed the intervention sessions and trained the promotoras (community health workers) who will engage the study members to fully participate in the program.

The expectations are that at the end of the program, active participants will have changed their dietary habits in a healthy way compared to what they were consuming at the start of the study and compared to the controls. It is also expected that they will be more active and have fewer mental health concerns (including better able to manage stress). As the program is short, the workers will most likely not show much of a difference in weight or blood glucose levels, but the hope is that new healthy habits and continuing community support will have



Maricela Gutierrez (above) is one of the Pasos Saludables (Healthy Steps) Project promotoras from the Oxnard area. At a training session in April, she practiced for future presentations of the Understanding Diabetes session, which is part of the MAHRC and Reiter-Affiliated Companies' evaluation of this important intervention program to reduce obesity.

a long-term effect of reducing obesity and the disproportionately high rates of diabetes found in the Latino community.

The project was initiated at the behest and with financial support

of Reiter Affiliated Companies. Marc Schenker, M.D., MPH, and Xóchitl Castañeda are providing the overall scientific direction through MAHRC and the University of California, Davis.

## Farm Bureau hosts health & safety fair in Walnut Grove

The Sacramento County Farm Bureau received the First Annual WCAHS Outstanding Achievement in Farm Health & Safety Recognition Award in 2008. Executive Director Charlotte Mitchell accepted the \$1,000 award, stating that the money would directly benefit their efforts to continue their farm worker safety training and farm worker family health fair.

As part of its ongoing mission to provide health and safety, the Sacramento County Farm Bureau, Caring for the Community, sponsored a Health & Safety Free for All fair at Walnut Grove Elementary School on April 21st. Participants received immunizations screening; adult Tetanus and H1N1 flu vaccines; cholesterol, blood pressure and blood sugar screenings; dental, hearing and vision screenings; nutrition education; and other health and safety information.

Working with Dr. Ellen Liebowitz of Woodland, Dr. Joann Helmus, of Helmus Optometry in Davis, coordinated and participated in the health fair for a second year, providing 87 vision screenings. They were assisted by UC Davis pre-optometry students Ivan Lee, Robert Pintacsi and Alan True.

John Hawck, project coordinator Delta Valley Lions Club, and VSP (Vision Service Plan) provided the equipment. VSP also provided 100 vouchers

(valid through Dec. 31, 2010) for a comprehensive eye examination and for glasses and lenses, if needed.

Mark your calendars. The 2011 Farm Bureau Health & Safety Fair will be held on April 13, 2011, in Walnut Grove. Donations can be made directly to the Sac County Farm Bureau for this worthy endeavor.





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Agricultural Health  
and Safety

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## Calendar of Events

May 24, 25, 26

**Worker Occupational Safety and Health (WOSH) Specialist Certificate Training** titled "Health and Safety on the Job" in Mendota, CA, by WCAHS Outreach & Education Specialist Teresa Andrews and UC Berkeley staff – Free

June 1-2

**Sustainable Textiles and Medical Protections (STAMP 2010)**, UC Davis Campus. For more information, contact Gang Sun, [gysun@ucdavis.edu](mailto:gysun@ucdavis.edu), or visit the Web site <http://nsf-muses.ucdavis.edu>

June 2

**Green Acres, Blue Skies III**, sponsored by the UC Davis Agricultural Air Quality Research Center. For more information, visit <http://airquality.ucdavis.edu> on the Web

June 7

**Victor Duraj**, UC Davis Development Engineer, will present "Harvesting Aids for Reducing Ergonomics Risk Factors in Fruit Orchards" during the WCAHS Seminar Series, 4-5 p.m., 3201 Hart Hall, UC Davis Campus

June 8

**WCAHS 20th Anniversary Celebration Reception**, 4-6 p.m., Robert Mondavi Institute for Wine and Food Science

**The 2010 WCAHS seminar series is available via video webcast at [http://agcenter.ucdavis.edu/seminar/webcast\\_2009.php](http://agcenter.ucdavis.edu/seminar/webcast_2009.php)**