



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

## CTSC evaluating the impact of WCAHS: Does it work? Will they use it? Did it make a difference? How do we make it better?

Attaining clear, effective, and transferable research outcomes requires ongoing attention to evaluation, and the Western Center for Agricultural Health and Safety (WCAHS) has enlisted the expertise of the UC Davis Health System's Clinical and Translational Science Center (CTSC) to develop an innovative yet practical evaluation program. For each year of its renewed NIOSH grant funding (2011-2015), the WCAHS Evaluation

Program Director Julie Rainwater, Ph.D., and her team members at CTSC will be an integral part of the success of the Ag Center.

As part of the Administrative Core of the Ag Center, Rainwater and her team will provide the infrastructure, personnel and support to effectively monitor and evaluate the Ag Center and its components. The WCAHS Evaluation Program will assess the implementation of the center's research, education and public

service programs and describe the center's impact on improving health and safety in western agriculture. The Evaluation Program also serves as a resource to center investigators, staff, students and community partners involved with the WCAHS.

In late 2006 UC Davis was honored to be among the first 12 institutions to receive a coveted Clinical and Translational Science Award (CTSA). Today, the CTSC provides resources that faculty and staff across the spectrum

of scientific research can use to improve health and health-care delivery.

The CTSA consortium now includes 60 medical research institutions in 30 states and the District of Columbia. Researchers, industry representatives, potential scholars or members of the community are encouraged to use the UC Davis CTSC website (<http://www.ucdmc.ucdavis.edu/ctsc/>) to explore services and resources.



Pictured, from left, are CTSA staff members: Miyishia Slay, Erin Griffin, Ph.D., Julie Rainwater, Ph.D., Christine Hotz, DVM, Polly Latow, and Stuart Henderson, Ph.D.

## Dermatitis expert Maibach guest speaker at Nov. seminar

The Western Center for Agricultural Health and Safety was pleased to welcome science world luminary Howard Maibach, M.D., at its Nov. 7 seminar. A professor in the Department of Dermatology at UCSF, Dr. Maibach specializes in dermatotoxicology (toxicity through skin exposure) and dermatopharmacology (treatment of skin diseases).

Numerous collaborators from UC Davis enjoyed Dr. Maibach's presentation, including Microbiologist Demosthenes Pappagianis, M.D., Ph.D., who collaborated with Dr. Maibach on skin testing methods for coccidioidomycosis and tuberculosis in the 1960s. WCAHS researchers Bruce Hammock and Shirley Gee worked with Dr. Maibach on new assays for measurement of urinary metabolites of the pesticide atrazine. Michael O'Malley, M.D., physician and researcher with the UC Davis Center for Health and Environment, arranged for Dr. Maibach's visit. The two had collaborated on a WCAHS seed grant study to establish safe concentrations for allergy testing of pesticides and document skin reactions to both nursery plants and pesticides.

Calling themselves groupies of rock star Howard Maibach, research fellows from Dr. Maibach's UCSF lab in dermatology and residents from the UC Davis Dermatology program reflected his long-term role in teaching and stimulating interest in environmental and occupational dermatology. Beginning in

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## Veterinarian health examined at October WCAHS' seminar

In 1997, 2,000 California veterinarians were sent questionnaires by researchers Päivikki Susitaival, M.D., Ph.D.; Steven Berry, DVM, MPVM; John H. Kirk, DVM, MPVM; and Marc B. Schenker, M.D., MPH. The investigators were interested in health issues in California veterinarians, such as on-the-job injuries, cumulative trauma, respiratory and skin symptoms, and zoonoses. A total of 1,416 (73%) responded, of which 1,353 were professionally active veterinarians.

During the WCAHS October seminar, titled, "Work-Related Health among California Veterinarians – A questionnaire," two of the investigators discussed their findings. The seminar was presented in two parts: first by Päivikki Susitaival, visiting scholar from the Department of Dermatology, North Carelia Central Hospital, Joensuu, Finland; followed by Steven Berry, DVM, MPVM, extension specialist in dairy management and health in the UC Davis Department of Animal Science.

Some of the study's findings include:

- Zoonoses were reported by 530 (39%) of respondents
- 2.2 percent had chronic problems from zoonoses, mostly from brucellosis
- 87 reported infections/abscesses after bites, including five generalized infections/septicemias
- Reporting of atopic symptoms was common
- High prevalence of hand dermatoses, asthma, cumulative trauma disorders and medication use
- Dermatoses and respiratory symptoms were often related to animals; however, general health was considered good.

Drs. Susitaival and Berry's PowerPoint summaries of the study, with a focus on cumulative trauma disorders (CTDs) and skin cancer as well as advice for preventing on-the-job injuries and pending future analyses, are available on the WCAHS website: <http://agcenter.ucdavis.edu/>, click on the Seminar Series link.



Päivikki Susitaival, M.D., Ph.D., and Steven Berry, DVM, MPVM

Maibach... *continued from page 1*



From left, Dr. Demosthenes Pappagianis and his colleague Dr. Howard Maibach

the 1950s, researchers recognized poisonings associated with residues of parathion and other organophosphates as a fundamental occupational health issue for agricultural health workers. While dermal penetration of these poisons was once considered a simple diffusion of chemicals through the outermost layer of the skin, Dr. Maibach noted some of the factors that markedly influence absorption. These include the physical and chemical properties of each compound, effects of the carrier compound, and duration and frequency of skin contact.

From the audience, Dr. Maibach introduced Charles Salocks, Ph.D., Office of Environmental Health Hazard Assessment (OEHHA) and former research collaborator, to summarize the results of recent studies showing that skin pH has a significant effect on the efficiency of dermal absorption of methamphetamine hydrochloride.

Dr. Maibach's current research programs include defining the chemical-biologic faces of irritant dermatitis and the study of percutaneous penetration.

When he's not in the lab conducting research or in the classroom teaching, Dr. Maibach is

seeing patients at the Dermatology Clinic's Environmental Dermatoses Clinic. He is a valuable resource for patients with contact sensitivity to household, environmental or occupational chemicals.

Dr. Maibach has been on the editorial boards of more than 30 scientific journals and is a member of 19 professional societies. His books relevant to agricultural dermatology include *Dermatologic Botany* and *Pesticide Dermatoses*, both published by the CRC Press, and he is a co-editor of the *Handbook of Pesticide Toxicology*, published in 2010 by the Academic Press. He can be reached at his Dermatology Practice Office, Mt. Zion Campus, San Francisco, 415-353-7800.



Seated with UCSF and UCD residents and graduate students (at far left) is Jared Jagdeo, M.D., M.S., UC Davis Medical Center Department of Dermatology and Sacramento VAMC Dermatology Service, attending physician.

# WCAHS meeting focuses on ag health & safety in the western states

Agricultural health and safety needs across our western states region from multiple perspectives was the theme for this year's Western Center for Agricultural Health and Safety (WCAHS) External Advisory Board (EAB) meeting. On Sept. 20, the EAB and the WCAHS Steering Committee met at the Buckhorn Steakhouse in Winters, Calif.

WCAHS Director Marc Schenker welcomed new EAB members Trish Danby, risk management director for Diageo Estates-Sterling Winery; John Packham, M.D., University of Nevada School of Medicine; and Philip Harber, M.D., College of Public Health, School of Medicine, University of Arizona. Dr. Schenker also announced approval of the five-year renewal of WCAHS funding;

however, NIOSH has awarded funding only for Oct. 1, 2011 through Sept. 30, 2012. Funding for the second through fifth years will depend on President Obama's annual budgets.

The WCAHS annual strategic planning retreat convened immediately following the EAB meeting and was attended by a total 46 enthusiastic and engaged participants. Guest speakers highlighting the morning's theme were Neal Van Alfen, dean of UC Davis College of Agricultural and Environmental Sciences; Craig McNamara, farmer and president of the California State Board of Food and Agriculture; and Bill Krycia, CalOSHA regional manager/enforcement.

ity, regulations, many issues are related to the environment and agriculture." Questions he posed to the audience were: How do we improve access to safe, healthy food security? How do we deal with regulations and streamline but maintain environmental integrity? How can we support and encourage the next generation of farmers?

Bill Krycia, stepping in for CalOSHA Chief Ellen Widess, acknowledged that enforcement needs to be balanced with outreach. CalOSHA has adopted training and outreach materials developed by WCAHS and looks for more collaboration in the future.

The enlightening afternoon



WCAHS' combined External Advisory Board and Steering Committee meeting was held on Sept. 20 at the Buckhorn Restaurant in Winters, Calif. From left, Jay Schreider, Steering Committee (back to camera); Debbie Bennett, WCAHS researcher; John Packham, director of health policy research, University of Nevada (new EAB member); Kent Pinkerton, Ph.D.; Marc Schenker, M.D., MPH; Tamara Hennessy-Burt, M.S.; Ria de Grassi, M.S., and Xochitl Castañeda, Ph.D., Steering Committee.



Afternoon breakout session: (from left) Ria de Grassi, CFBF; Joel Sherman, director, Safety & Worker's Comp, Grimmway Farm; Kent Pinkerton, WCAHS; and Lupe Sandoval, director of the California Farm Labor Contractor Association.



Jerry Last, WCAHS Steering Committee; Trish Danby, director of risk management, Diageo Estates/Sterling Vineyards (new EAB member); and Shirley Gee, senior research associate, Department of Entomology.

Having recently become a farmer, Van Alfen mentioned his renewed awareness that "farm labor is skilled labor." To address the need for higher wages for laborers and an observation that low food prices are not sustainable, Van Alfen iterated the need for collaboration, noting that "the agricultural community is good at this."

Craig McNamara reminded the group, that "food is politics... water, immigration, air qual-

program, "Changing demographics," included gripping presentations by Chukou Thao, executive director of the National Hmong American Farmers; Leoncio Vasquez, executive director, el Centro Binacional para el Desarrollo Indigena Oaxaqueno; Anne Searcy, chief medical officer and senior vice president of Zenith Insurance Company; and Phil Martin, professor in the UC Davis Department of Agricultural & Resource Economics.

## Join the AgHealth e-mail listserver

The Western Center for Agricultural Health and Safety's AgHealth e-mail discussion group is open to anyone interested in agricultural health and safety. We welcome and encourage participation by posting comments or questions about agricultural health and safety. Subscribe at the WCAHS homepage: <http://agcenter.ucdavis.edu>, click on "AgHealth email List."



University of California  
One Shields Avenue  
Davis, CA 95616-8757

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Director..... Marc Schenker  
Assoc. Director ..... Kent Pinkerton  
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Director of Research ..... Frank Mitloehner  
Education/Outreach Specialist ... Teresa Andrews  
Manager/Editor ..... Sandra Freeland

## Calendar of Events

Thursday, December (by Noon)  
**WCAHS Seed Grant proposals due.**

Monday, December 5  
**Fadi Fathallah, Ph.D.**, professor and research scientist, Biological & Agricultural Engineering, UC Davis, will present "**Recent agricultural ergonomics research at UC Davis**" during the WCAHS Seminar Series, 4–5 p.m., at CHE on Old Davis Road.

Wednesday, December 21  
**WCAHS Seed Grant awards announced.**

Monday, January 9, 2012  
**WCAHS Graduate Student Presentations**, 4–5 p.m., at CHE on Old Davis Road.

Monday, February 6, 2012  
**Shirley Gee, M.S.**, senior research associate in the UC Davis Department of Entomology, will present "**Advances in Immunoassays for Pesticide Detection**" during the WCAHS Seminar Series, 4–5 p.m., at CHE on Old Davis Road.

**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)**



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