

Cultivate

Newsletter of the National Farm Medicine Center

Winter 2009

Our Mission

"To conduct high quality research addressing human health and safety associated with rural and agricultural work, life and environments."

Save the Date:

The 2009 Auction of Champions is scheduled for Thursday, Sept. 24, at Clearwaters Hotel and Convention Center, Marshfield. Up for bid will be golf trips, a group outing to a Badgers game, Packers tickets, jewelry, art, weekend getaways, home decor and much more, including the traditional prime meat packages.

Since the first Auction in 1982, nearly \$1.9 million has been raised to support the work of the National Farm Medicine Center. For information, contact Jill Kurszewski at 715-389-5146 or kurszewski.jill@marshfieldclinic.org.

National Children's Center funded for another 5 years

The National Children's Center for Rural and Agricultural Health and Safety has received a five-year, \$4.6 million competitive grant to expand its initiatives related to injury prevention on farms. Barbara Lee, Ph.D., serves as the Center's Director, with Barbara Marlenga, Ph.D., as the Deputy Director.

The projects funded cover a variety of research, intervention evaluations and outreach to enhance the health and safety of children exposed to hazards associated with agricultural work and rural environments.

The grant was announced by the National Institute for Occupational Safety and Health (NIOSH), which first chose the National Children's Center to guide its Childhood Agricultural Injury Prevention Initiative in 1997.

The caliber of past activities that translate research into practice serve as the foundation for the Center's updated theme of, "Moving childhood agricultural safety knowledge into practice through sustained partnerships," Dr. Lee said.

The Research Core includes a project to study the short- and long-term economic impacts of injuries to children on farms. The Prevention Core includes one project to test the impact of incentives for motivating farm families to build safe play areas; and a project to integrate safety guidelines for hired adolescent farm workers into training practices of field supervisors in labor intensive agriculture in California and Washington.



Since establishment of the National Children's Center in 1997, the rate of childhood agricultural injuries per 1,000 farms declined by more than one-third.

The Outreach Core consists of three projects: Stakeholder Communications led by Scott Heiberger, the Childhood Agricultural Safety Network led by Regina Fisher, M.S., and the new Blueprint for Knowledge Translation project, which aims to translate research into practice. The first phase will collect findings from research conducted since the assessment for the 2001 Summit on Childhood Agricultural Injury Prevention. Marcy Fitz-Randolph, D.O., M.P.H., will assist this project's other staff, located at Tufts University Medical Center in New York.

The National Children's Center is a program of the National Farm Medicine Center. More information on the National Children's Center can be found at its redesigned Web site: www.marshfieldclinic.org/nccrahs.

 National Farm Medicine Center.



Marshfield Clinic[®]
Research Foundation

Auction generates \$190,000 for the NFMC



This year's Auction grand finale gave one lucky winner the chance to play for \$10,000 in "Deal or No Deal." Joellen Heiman, Marshfield, bargained with host "Toddy Mandel" and went home with \$5,000.

An increasingly diverse list of bid packages netted \$190,000 at the annual Auction of Champions to benefit the work of the National Farm Medicine Center. The event was held Sept. 25, 2008, at Clearwaters Hotel and Convention Center, Marshfield. Packages

included a behind-the-scenes visit to the Country Music Association Festival in Nashville, Tennessee, June 2009, escorted by country singer-songwriter Michael Peterson. The all-expense paid trip for four was donated by NFMC, Norm-E-Lane Farms and Highstreet. Al Nystrom, president of the M&I Bank - Marshfield Group, will serve as Auction chair again for 2009. For more about the Auction – including photos from 2008 – go to www.marshfieldclinic.org/auction.

AGROMEDICINE

Steven Kirkhorn, M.D., M.P.H., Medical Director of the NFMC, secured funding to conduct AgriSafe training of Wisconsin rural health care practitioners, with the first course scheduled in May 2009. AgriSafe is a national organization of health professionals.

The NFMC secured a \$60,000 grant from the Centers for Disease Control and Prevention (CDC) to help support the 6th International Symposium: Public Health and the Agricultural Rural Ecosystem, held Oct. 19-23, 2008, in Saskatoon, Saskatchewan, Canada. A special Journal of Agromedicine issue dedicated to the symposium will be published in May 2009. Representing the NFMC at the symposium were Drs. Lee and Marlenga, as well as Joseph Mazza, MD, MACP.

CHILDHOOD AGRICULTURAL SAFETY AND HEALTH

Barbara Marlenga, PhD, was co-investigator on a study that indicated the ergonomic forces required to operate controls on 40 common tractor models in the U.S. typically exceeded the physical abilities of most children aged 13 to 17 years. Dr. Marlenga said the study raises serious questions about the ability of children to safely operate tractors on U.S. farms, and it provides objective evidence that could assist in establishment of evidence-based minimum-age recommendations for children and tractor operation. In a project just getting underway, Dr. Marlenga secured nearly \$1 million to follow up on a study conducted by the NFMC 15 years ago that found educational intervention improved hearing protection use among farm youth. Dr. Marlenga will locate and study the same group of individuals to see whether that increase in hearing-protection use continued into adulthood, and if that protection helped preserve hearing.

The National Children's Center has released new resources for agritourism operators; the Policies and Procedures Guide and the Worksite Guide. These 10-page checklist guides were developed for



use by agritourism owners and managers, and farm owners who host children and groups. These guides supplement the popular Agritourism Health and Safety Guidelines for Children published in 2007, and are available at: <http://marshfieldclinic.org/agritourism>.

PUBLIC HEALTH MICROBIOLOGY

Mark Borchardt, Ph.D., hosted the Marshfield portion of a conference that brought together U.S. Department of Agriculture, Environmental Protection Agency, U.S. Geological Survey, university and state agency specialists to evaluate technologies and innovative systems in environmental dairy management. The conference, June 17-19, 2008, included farm field trips to the Green Bay area. Attendees saw a manure burner and a methane digester, and farming methods to reduce manure impact on groundwater. They stopped at the Institute for Environmentally Integrated Dairy Management (IEIDM) in Marshfield, and the nearby farms of Alan and Emily Kraus, and Ralph and Sharon Bredl.

Dr. Borchardt's lab, as part of work with the USDA, developed and validated a method for simultaneously collecting pathogenic viruses, bacteria and protozoa from agricultural runoff water. They used an inexpensive glass wool filter to concentrate multiple varieties of waterborne pathogens that previously required multiple methods or complicated and expensive equipment.

INFECTIOUS DISEASE MICROBIOLOGY

The Infectious Disease Laboratory team of Steve Foley, Ph.D., recently found a unique series of genes encoding what is known as a secretion system in a number of highly antimicrobial-resistant strains of *Salmonella*. Secretion systems are known to facilitate the invasion of animal and human hosts and facilitate the spread of antimicrobial resistance among bacteria. The lab is studying whether strategies can be developed to reduce the spread of antimicrobial-resistant pathogens. Dr. Foley discussed this and other work being conducted in his lab, along with potential career opportunities, when he hosted a group of Midstate Technical College nursing students.

COMMUNITY SERVICE



NFMC scientists and staff provided 100 hours of volunteer time for the third year in a row at the Rotary Winter Wonderland in Marshfield. Steve Foley, Ph.D., had the idea to utilize used laboratory petri dishes as ornaments.