David Osterberg to Head Community Outreach and Education Core

In January 2003, David Osterberg, who had formerly been Associate Director for Policy Initiatives of COEC, became the new director. Former director Shannon Marquez left the University of Iowa to return to the University of Texas at San Antonio. Mr. Osterberg is Clinical Associate Professor in the Department of Occupational and Environmental Health with a secondary appointment in the Department of Geography. Professor Osterberg was formerly special assistant to the Director of the Iowa Department of Natural Resources on global climate change and renewable energy. Prior to that he served 12 years in the Iowa General Assembly, chairing both the Agriculture Committee and the Energy and Environmental Protection Committee. In his role as Core Director, Professor Osterberg will develop new COEC initiatives while overseeing the Environmental Health Sciences Institute for Rural Youth and providing leadership on statewide environmental health outreach and education.

environmental health sciences research center

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EHSRC Update

news from the university of iowa environmental health sciences research center

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EHSRC Welcomes Dr. Larry Robertson and Dr. Gabriele Ludewig

Dr. Larry Robertson and Dr. Gabriele Ludewig will be joining the Environmental Health Sciences Research Center as well as the Department of Occupational and Environmental Health beginning March 1, 2003. Dr. Robertson has a background in chemistry, microbiology, and environmental health sciences. Since 1986 he has held faculty positions with the Graduate Center for Toxicology at the University of Kentucky and has also directed the University of Kentucky Superfund Basic Research Center. His primary area of research is the mechanism of toxicity of environmental carcinogens, including polyhalogenated biphenyls (PCBs) and various pesticides. Dr. Ludewig came to work as a post-doctoral scholar at the University of Kentucky after receiving her doctorate in toxicology from the University of Mainz in Germany. Her research has focused on the mechanisms of cytotoxicity, genotoxicity, and carcinogenicity of compounds found as contaminants in food and the environment. Dr. Robertson will direct the EHSRC's Pilot Grant Program and a new Toxicology Development Initiative. This initiative will be carried out over the next grant cycle, working toward the creation of a new research core in the EHSRC.

Iowa Community Private Well Study

The Iowa Community Private Well Study is a cooperative research study between the University of Iowa Hygienic Laboratory, the United States Geological Survey, the Iowa Department of Natural Resources, the Center for Health Effects of Environmental Contamination, and the Environmental Health Sciences Research Center. The purpose of this study is to assess water quality in small incorporated Iowa communities that use only private wells for drinking water. Little is known about drinking water quality in communities utilizing private wells as opposed to central public water supply systems that are regulated and monitored by the local water department. The objectives of this study are to sample wells in communities without public water systems to assess drinking water quality, and to assess the probability for well contamination. This past summer and fall, county environmental health specialists visited towns to collect water samples and conduct a survey of well construction history and other site characteristics. Data collection was completed in January, and analytical results should be completed in March.

Photo courtesy of Heaven Farm

Research Week 2003: Constructing the Future of Medicine

Planning is underway for the University of Iowa Research Week to be held April 1st through April 4th. Co-sponsors of this event are the College of Public Health, the College of Medicine, and the VA Medical Center. EHSRC Director Peter Thorne has served as one of the co-chairs of the planning group. Events include speakers, panel discussions, workshops and poster sessions. Workshops are planned on bioterrorism and a variety of other topics. Three different poster sessions will be held; one for graduate students; one for post-docs, fellows, and residents; and one for faculty and staff. Featured speakers are listed below. A complete schedule of events can be found at http://www.medicine.uiowa.edu/research/researchweek.

- ***Bioterrorism in the United States***
  Stephen A. Morse, MSPH, PhD, Emory University, Centers for Disease Control
- ***Understanding Obesity as a Disorder of Body Weight Regulation***
  Michael Schwartz, MD, University of Washington
- ***Epithelial Differentiation of Bone Marrow-Derived Stem Cells***
  Diane Krause, MD, PhD, Yale University School of Medicine
- ***An Evidence-Based Approach to Improving Health Care***
  Rodney A. Hayward, MD, University of Michigan Health System

EHSRC to Hold CAFO Scientific Workshop

In 2001, the EHSRC sponsored a Town Meeting on Concentrated Animal Feeding Operations (CAFOs), and in 2002 a major scientific report requested by Iowa's governor led directly to the passing of the first change in Iowa animal agriculture law since 1995. As a follow-up to the Iowa Town Meeting and the CAFO Air Quality Report, the EHSRC will host a 3-day workshop with the working title, "Environmental Health Impacts of CAFOS: Anticipating Hazards - Searching for Solutions." This event will be held in Iowa City October 8-10th, 2003, and will include national and international experts in all aspects of this topic. The first day will include plenary lectures on air quality issues, greenhouse gas emissions, water quality issues, the emergence of antibiotic resistant organisms, occupational health issues, community health issues, and policy and regulation. EHSRC members of the planning committee include; Peter Thorne, David Osterberg, Jennifer Cook, Kelley Donham, Mary Gilchrist, James Merchant, Patrick O'Shaughnessy, Wayne Sanderson, and Robin Ungar. The Community Outreach and Education Core (COEC) continues to be involved in the rule-making process with the Iowa Department of Natural Resources in an attempt to provide IDNR with a sound scientific basis to policy.

Recent and Upcoming EHSRC Seminars

Environmental Contaminants as Hormones in Wildlife: Effects from Genes to Populations
Louis Gillette, PhD, Distinguished Professor of Zoology
University of Florida
February 19, 2003

Microbial Biopesticides and Endotoxin: Hazards in the Greenhouse and Grass Seed Industries
Gert Doekes, PhD, Institute for Risk Assessment Sciences
Utrecht University, The Netherlands
March 5, 2003

EPA to hold Hearing on Environmental Threats to Older Americans

People become more susceptible to environmental hazards as they grow older, and by 2030, the number of elderly Americans is expected to reach 70 million. This past October, the Environmental Protection Agency announced a new Aging Initiative to examine and prioritize environmental health threats to older persons. In December, the National Academy of Sciences held a workshop to examine this issue, and this spring, a series of public meetings will be held throughout the country to solicit input from all stakeholders involved. Iowa City was chosen as the location for one of these meetings. On April 15th, 2002, the administrator of the EPA, Christine Todd Whitman, will preside over a listening session to be held at the Iowa Memorial Union. This forum is being co-sponsored by the Center on Aging and the EHSRC, with involvement from the Heritage Center on Aging. The EPA is hoping to receive input from researchers, students, older adults, and other interested members of the public. From these hearings, it is hoped that a national agenda on the environment and aging will be created. More information can be found at www.epa.gov/aging.

Agricultural Health Study Plans for Phase III

On December 12, 2002 the EHSRC co-sponsored a dinner and one day meeting with principal investigators from NIEHS and NCI to discuss ideas for Phase III studies in the Agricultural Health Study Cohort. The Iowa Ag Health Study, which is directed by Dr. Chuck Lynch, is funded by the National Cancer Institute and the Environmental Protection Agency. The National Institute of Environmental Health Sciences has enrolled 89,658 private pesticide applicators, spouses of private pesticide applicators and commerical pesticide applicators in Iowa and North Carolina. This large cohort will be followed for 10 years or more to obtain detailed information on agricultural exposures, diet, and other factors which may be related to the development of cancer and other diseases. Information gathered will provide data on agricultural practices that can be helpful to farmers nationwide. The goal of the December meeting was to identify topic areas where there is interest in collaborative research. A further goal was to discuss projects for which grant proposals should be developed by investigators at the University of Iowa that center around the Agricultural Health Study and the Iowa Field Station. Eight EHSRC investigators gave presentations on research hypotheses and capabilities within the Center.

Pulmonary Biology Research Core Explores CpG DNA

One realization over the past decade has been that, although symptomatic airway inflammation caused by inhalation of endotoxin and other contaminatns of organic dust is common among rural and agricultural inhabitants, allergy is generally reduced in this population. This has led to the development of the "hygiene hypothesis," which holds that the current epidemic of asthma and allergic disease in the developed world may be due to an inadequate exposure to microbial products or infectious diseases early in life. One of the most immunopotent microbial products is bacterial DNA, which differs from mammilian DNA in its content of CpG motifs. Members of the Pulmonary Biology Research Core, including Zuhair Ballas, Bradley Britigan, and Joel Kline, have explored the effects of CpG DNA on immune response, and have found that it can both prevent and treat established atopic airway inflammation. These responses are mediated through multiple cells including B-cells, Dendritic Cells, and (at least indirectly) T-lymphocytes. Their results have been published in the Journal of Immunology.