

**I SEE/I SEA CONFERENCE**

September 2-6, 2006  
Paris, France  
<http://www.paris2006.afsset.fr>

**EUROPEAN RESPIRATORY SOCIETY 2006**

September 2-6, 2006  
Munich, Germany  
<http://www.http://www.ersnet.org/ers/>

**THE FOURTH PCB WORKSHOP**

September 6-10, 2006  
Zakopane, Poland  
<http://www.pcbworkshop.org/>

**7TH INTERNATIONAL AEROSOL CONFERENCE**

September 10-15, 2006  
St. Paul, MN  
<http://www.aaar.org/meetings/IAC2006/index.htm>

**OCCUPATIONAL HYGIENE 2007**

April 17-19, 2007  
Glasgow, UK  
[www.bohs.org](http://www.bohs.org)

Peter S. Thorne, Ph.D.  
Center Director

James A. Merchant, M.D., Dr.P.H.  
Associate Director

Joel Kline, M.D.  
Deputy Director

David Osterberg, M.S.  
COEP Director

Nancy Newkirk, B.A.  
Editor

Environmental Health Sciences  
Research Center  
The University of Iowa  
100 Oakdale Campus, IREH  
Iowa City, IA 52242-5000  
(319) 335-4756

# EHSRC UPDATE



## Superfund Basic Research Program Awarded to EHSRC Investigator Larry Robertson

**E**HSRC investigator Larry Robertson and colleagues received a Superfund Basic Research Program award in May 2006 from NIEHS, titled, "Semi-volatile PCBs: Sources, Exposures, Toxicities." The program is a joint venture between 15 researchers—most of whom are EHSRC members—in 4 colleges at The University of Iowa; (Public Health, Medicine, Engineering, and Pharmacy). The Center is comprised of multiple projects which examine the consequences of atmospheric sources and exposures to semi-volatile Polychlorinated Biphenyls (PCBs). Among the exposure sources identified for study are contaminated waters, disposal sites for Lake Michigan sediments, former industrial sites and other atmospheric sources of PCBs.



Dr. Larry Robertson  
Program Director

Dr. Robertson noted, "The research addresses issues that are often overlooked, namely the volatilization of semi-volatile pollutants, their movement and their effects. While the abilities of these pollutants to accumulate, especially in fatty tissues, and move through the food web are well known, air transport of semi-volatile pollutants, and the impacts of those processes on human health, are not well understood. This program grant fills those needs," he said.

The program will undertake six major research projects: Project 1, "PCBs: Metabolism, Genotoxicity and Gene Expression *in Vivo*" under the direction of Dr. Larry Robertson; Project 2, "Oxidative Stress and PCB Exposure in Mammalian Cells," under the direction of Dr. Douglas Spitz; Project 3, "PCBs and Hydroxysteroid (Alcohol) Sulfotransferases," led by Dr. Michael Duffel; Project 4, "Atmospheric Sources of PCB Congeners," directed by Dr. Keri Hornbuckle; Project 5, "Phytoremediation to Degrade Airborne PCB Congeners from Soil and Groundwater Sources," under the direction of Dr. Jerry Schnoor, and; Project 6, "Characterization of Exposures of Urban and Rural Cohorts to Airborne PCBs," led by Dr. Peter Thorne, Director of the EHSRC.

The research projects will utilize three facility cores within the center; a Synthesis Core under the direction of Dr. Hans Lehmler, an Analytical Core headed by Dr. Keri Hornbuckle, and an Inhalation Toxicology Core led by Dr. Peter Thorne.

Dr. Thorne will also direct the Research Translation Core and a community-based participatory project to assess exposures to citizens who live in East Chicago, Indiana, where many ethnic-minority citizens are living within an area with substantial legacy pollution. Columbus Junction, Iowa will serve as a comparison site for this industrial site. David Osterberg and Nancy Newkirk, along with collaborators from the University of Illinois—Chicago will translate research findings to a variety of stakeholders and involve them in the research process.

Additionally, Dr. Vicki Persky will direct a Community Outreach Core, and Dr. Gabriele Ludewig, a Training Core through which the research projects will provide training for more than 20 students and postdoctoral scholars.

## environmental health sciences research center

Institute for Rural and Environmental Health  
The University of Iowa  
100 Oakdale Campus, IREH  
Iowa City, IA 52242-5000



## Pilot Grant Awards—Spring 2006

The EHSRC funded three pilot grants in May, 2006. Designed to enhance and promote research and training in the environmental health sciences, the EHSRC Pilot Grant Program is open to all University of Iowa researchers interested in environmental health, with priority given to junior investigators. Applicants can apply for funding for U.S.-based projects or for collaborative, international projects. For more information, visit:

<http://www.ehsrc.uiowa.edu/PilotGrantPrgm.htm>

### 2006 EHSRC Pilot Grant Awards

- **Katarina Kulhankova, MD, MS.** Postdoctoral Fellow (Sept 2006). *Role of Fetal and Perinatal Allergen Exposures in Pulmonary and Immune Hyperresponsiveness.* Mentors: Peter S. Thorne and Elizabeth H. Field.
- **Gregor Luthe, PhD.** Postdoctoral Fellow. *Pulmonary exposure to airborne polybrominated diphenyl ethers (PBDEs), using promising novel biomarkers.* Mentors: Peter S. Thorne and Larry W. Robertson.
- **Thomas M. Peters, PhD.** Assistant Professor. *Relating Cardiac Function to Diesel Exhaust Inhalation Exposure.* Mentors: Wayne T. Sanderson, Peter S. Thorne, Brian Olshansky, and Joel N. Kline.

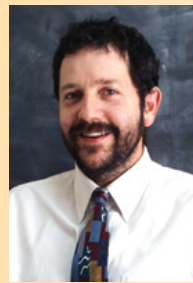
## UI Asthma Center Conference for Health Care Professionals held May 5, 2006

On May 5, 2006, The University of Iowa (UI) Asthma Center held its first Center conference titled, “Asthma and the Environment: Translating Science into Patient Care.” EHSRC investigator and UI Asthma Center Director Joel Kline opened the conference, followed by various faculty lectures in asthma diagnosis, care, and research. The conference was well attended with approximately 50 participants in the audience. Participants included medical professionals - physicians, pulmonologists, allergists, immunologists, nurses, physician assistants, nurse practitioners and other health care providers who care for patients with respiratory diseases.

Participating EHSRC members included Director **Peter S. Thorne** (“Indoor Air and Asthma: Can We Intervene to Reduce Endotoxin Exposure?”), EHSRC Deputy Director **Joel N. Kline** (“Worms and Bugs: the Hygiene Hypothesis and Asthma Therapy”), **Eric A. Hoffman** (“Imag(in)ing the Lungs in Asthma: Cool Pics and Mega-bits”), **Dwight C. Look** (Point/Counterpoint: Controversies in Asthma), and Chair of Medicine **Paul B. Rothman** (“Molecular Immunology of Asthma for the Clinician”). Guest faculty included: Robert Lemanske (University of Wisconsin, “The Origins of Childhood Asthma and Allergic Diseases”) and Tom Casale (Creighton University, “New Insights into the Use of Anti-IgE Therapy for the Treatment of Allergic Disorders”).

Participant evaluations were uniformly positive. The success of the first symposium will ensure that this is a regular event in the future. The complete program brochure is available at:

<http://www.medicine.uiowa.edu/cme/pdfs/Asthma%2006.pdf>



Joel Kline, Director  
UI Asthma Center

## EHSRC COEP Receives AHRO Grant to Hold Asthma Conference

In May 2006 the EHSRC COEP received a conference grant from the DHHS Agency for Health-care Research and Quality to host an educational asthma conference for tribal health agents working in the 18 Native American communities of the Northern Plains region. The conference will be held October 5-6, 2006 in Rapid City, SD, and will feature presentations from EHSRC investigators, as well as physicians and asthma specialists practicing in the Northern Plains area (IA, ND, NE, SD). Lecture topics on Day 1 include *Asthma and Obesity*, *Environmental Triggers of Asthma*, *Pediatric asthma*, *Current Asthma Research*, *Asthma Management and Intervention*, and *Tribal Initiatives*, as well as *Financial Considerations* and *Resources* for tribal health care providers and their patients. On Day 2, participants and lecturers will conduct small group discussions to address the problems and needs of asthma patients in the 18 Northern Plains tribal communities.



Since the 1960's, when asthma in Native populations was rare, the disease has become as prevalent for Native Americans as for the general U.S. population, making it a priority health issue with Native Americans and the health agents who serve them across the country. COEP staff will partner with the Aberdeen Area Tribal Chairman's Health Board in the design, structure, and implementation of the conference and development of a post-conference report.

## EHSRC Research Retreat Held June 7, 2006

On June 7, the EHSRC held its annual Research Retreat at The University of Iowa. Guest speaker Dr. Jane Hoppin of the NIEHS opened the meeting with a presentation on “Respiratory Diseases in the Agricultural Health,” which was followed by a series of presentations by EHSRC investigators and pilot grant awardees.

Dr. Jerold Weiss delivered a report from the Inflammation and Innate Immunity Research Cluster on “Regulation of Endotoxin Signaling and Clearance in the Lung.” Four past EHSRC pilot grant awardees provided updates on the progress of their projects, including Dr. Katarina Kulhankova (“The role of neonatal and juvenile inhalation exposures on pulmonary hyperresponsiveness and lung growth”), Dr. Caroline George (“The role of surfactant protein-A during early life environmental exposures”), Dr. Prabhat Goswami (“Polychlorinated biphenyls, intracellular antioxidants and cellular proliferation”), and Dr. Richard Milchak (“High resolution CT-based evaluation of airway responses to endotoxin inhalation”).

In addition, EHSRC Facility Core directors each provided a synopsis of the services their facilities available to EHSRC investigators.

New EHSRC initiatives, such as the development of an Interdisciplinary Graduate Program in Toxicology at The University of Iowa, and the formation of an Environmental Genomics component within the Center, were also discussed with progress updates provided. The graduate program proposal is in the final stages of the review process, and when approved, could begin to recruit students for fall, 2007. The environmental genomics initiative is already underway and providing technical and human subjects support, mentoring and training for junior investigators within the Center, and access to a DNA repository established at The University of Iowa.