

### RMCOEH to Participate in National Children's Study

The Rocky Mountain Center for Occupational and Environmental Health, located at the Primary Children's Hospital, the University of Utah School of Medicine's Department of Pediatrics and other government and health care groups in Salt Lake, is set to take part in the groundbreaking, National Children's Study.

The National Children's Study plans to examine the effects of occupational and environmental influences on the health and development of more than 100,000 children across the United States, following them from before birth until age 21. By studying children through their different phases of growth and development, we will be better able to understand the role of occupational and environmental factors on health and disease. The National Children's Study will be the richest information resource available for answering questions related to children's health and development. The study is expected to reform the basis of child health guidance, interventions, and policy, thereby improving the health and well-being of children for generations to come.

In September, Salt Lake County was awarded a \$16 million contract as one of the six initial Vanguard Centers. Teams from the Vanguard Centers will be the first to recruit participants and collect data as part of the decades-long research effort. Dr. Ed Clark, chair of the University of Utah's School of Medicine De-

partment of Pediatrics and medical director of Primary Children's hospital, is serving as the principal investigator of the Salt Lake County Study. It is estimated that Salt Lake County will have 1,250 individuals enrolled in the study by 2009, with selection beginning in July of 2007.

The Vanguard centers were selected from a pool of applicants through a competitive process. These centers were envisioned having advanced clinical research and data collection capabilities. They have also shown the ability to collect and manage biological and environmental specimens, work with community networks for identifying, recruiting, and retaining eligible mothers and infants, and demonstrated commitment to the protection and the privacy of data.

Throughout the course of the study, RMCOEH, under the direction of Dr. Rod Larson, will be involved in coordinating and collecting the environmental samples for this study. Environmental samples will include air, interior surfaces, soil, water and food.

Approximately 35 different agents will be measured. These different agents will include various metals, organics, pesticides, and radiation as well as biological agents, such as bacteria and molds. These samples will be obtained in the residence of participating women prior to conception, during pregnancy, and after the birth of the child.

Additional environmental monitoring will be conducted in the workplace of participating women that work outside their homes, as well as in day care centers where children are cared for outside their homes. An additional twelve industrial hygienists and industrial hygiene technologists are anticipated to be hired for this project.



**Governor Jon Huntsman, Jr. speaks at a Salt Lake City press conference for the National Children's Study on October 13, 2005.**

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## New Associate OM Residency Program Director



Eric Wood, MD, MPH

Eric Wood, M.D., MPH is the new Associate Occupational Medicine Residency program director.

Dr. Wood comes to RMCOEH with years of experience as an Occupational and Environmental Medicine Physician, a Family Medicine Physician, and as an Industrial Hygienist.

He received a Masters degree in Public Health from the University of

Hawaii in 1987 and obtained his Medical Degree at the University of Utah in 1995. His residency in Family Medicine was completed at the University of Nevada, Reno in 1998 and his residency in Occupational and Environmental Medicine was com-

pleted at the University of Utah, in 2003.

He has worked as an Industrial Hygienist for OSHA and has been a private consultant. Dr. Wood belongs to the American College of Occupational and Environmental Medicine, the American Association of Family Physicians and the American College of Preventive Medicine. Dr. Wood's professional interests include occupational injury and illness management and prevention, occupational and environmental exposure assessment, disability evaluation and causation assessment and public health.

*"Dr. Wood brings a wealth of experience and a keen clinical intellect. I am very pleased to have him as part of the team that will grow and improve our OM residency program."*

- Dr. Holmes  
OM program Director

## Black Diamond: A Collaborative Safety Effort

For six years, The Mechanical Engineering Department at the University of Utah (ME) has been collaborating with Black Diamond Equipment LTD (BD)—a company that manufactures and sells outdoor recreational equipment. In 1997, BD's safety program activity decreased markedly "due, in large part, to the departure of a key Human Resources employee,"<sup>1</sup> and became a "consistent topic at management meetings [leading to an] investigation of ways to reverse or at least slow this trend."<sup>1</sup>

The initial contact between BD and the U of U was facilitated by a BD employee who had taken several ergonomics and safety classes offered by ME, including one class that took field trips to several manufacturing companies, allowing students to become familiar with various aspects of occupational health and safety. The first field trip to BD was in 1999. Many joint safety projects soon followed and an employee based safety committee was formed in response to management's support of safety and the collaboration between U of U and BD.

toured BD at the beginning of each semester, after which project ideas were proposed, refined, and developed. One to three students would work on a project over the course of a semester. Projects usually required at least 50-150 hours of time and typically cost less than \$1,000 in materials.

Implemented projects include air nozzle replacement, forklift training, an improved dock landing area, a hearing conservation program, improved lock out/tag out, improved machine guarding, and respirator fit testing.

The effectiveness of safety efforts at a company can be measured by the OSHA recordable incidence rate (ORIR) or the Insurance Experience Modifier (IEM). The ORIR normalizes the recordable incident rate to a company with 100 full time employees working an entire year. From 1997-2004, BD's ORIR dropped from 7.3 to 2.9. The IEM measures the worker's compensation premium paid by a company in comparison to other companies, 1.0 being the average for any given industry. From 1997 to 2005, BD's IEM dropped from 1.54 to 0.67, a contributing factor

being the collaboration with the U of U. BD's insurance premiums also decreased. From 1997 to 1999, BD's insurance premiums totaled approximately \$79,000 more than the industry average. From 2000 to 2005, BD's insurance premiums totaled approximately \$128,000 less than the industry average.

Richard Sesek, PhD, Research Assistant Professor in ME, and Phillip Drinkaus, PhD, Research Associate in ME, played major roles in this collaboration. Sesek noted, "These opportunities allow students to complete their graduate research while providing a direct benefit to the company. Companies can get specialized assistance and research in areas that they need improvement while students gain valuable experience. In addition, potential employers get a chance to interview their prospective employees." If you are interested in benefiting from this class, contact Dr. Richard Sesek at [r.sesek@uconn.edu](mailto:r.sesek@uconn.edu).

1. Research by Richard Sesek, PhD, Industry and University Collaborative Safety Effort Annual Report, 2005. National Occupational Safety and Health (NIOSH) Regional National Occupational Injury and Illness Surveillance System (NORRIS) Young/New Investigators Meeting, Salt Lake City, Utah, April 2005.

# Introducing the New RMCOEH Faculty Members



**Scott Collingwood**

**S**cott Collingwood, PhD candidate, is the RMCOEH's newest Industrial Hygiene Research Associate.

Scott obtained his BSE in Industrial Engineering from The University of Iowa. After a decade of work in business and industry, he returned to school to pursue a graduate degree in Industrial Hygiene. He is currently a PhD candidate at the University of Iowa and will make a return visit to defend his dissertation, "Development of an Engineering Control

to reduce Respiratory Silica exposures in Construction Workers."

Scott also leads the Industrial Hygiene efforts in Continuing Education for the Rocky Mountain Center, helping to ensure that we are meeting the needs and the concerns of today's occupational health and safety professionals in our region. This includes current and emerging concerns such as ergonomics, emergency preparedness, indoor air quality and nanotechnologies. His career interests include teaching, developing research initiatives with engineering controls, and expanding research to underserved populations.

When not busy working, Scott enjoys spending time with his family, cycling, and now that he's in the Rockies, snow skiing.



**Hannah Edwards, MD,**

**H**annah Edwards, M.D., MPH is the RMCOEH's newest faculty member in the Occupational Medicine program.

She obtained her medical degree from Georgetown University in 1999, and completed her MPH at the University of Utah in 2004.

She is board certified in family medicine, board eligible in occupational medicine, and a certified medical review officer.

Dr. Edwards enjoyed a great deal of educational travel as part of her residency. Her rotations included OSHA and the Puget Sound's Naval Shipyards. She particularly enjoys teaching and working with students and occupational medicine residents. Recently, she helped write part of RMCOEH's Health Promotion grant application, and she's hoping to soon be working on a project involving the data collected in the low back pain study. Dr. Edwards' professional interests include teaching, clinical medicine, and studying the quality of occupational medicine. She hopes to be able to learn more about the clinics and how they might be used in improving the quality of occupational medicine.

In her free time, Dr. Edwards enjoys reading science fiction, spending time at the library, sewing, and walking.



**Leon Pahler, PhD, MPH,  
CAIH**

**L**eon Pahler, PhD, MPH, joined the RMCOEH faculty this June, bringing with him over 17 years of experience in environmental health, industrial hygiene and occupational safety.

Dr. Pahler received his undergraduate (BS) and graduate (MS) degrees in Chemistry from Brigham Young University and his Doctorate in Chemistry from Utah State University. He went on to spend three years at Oklahoma State University as a post-doctorate/faculty research fellow before moving to Parachute, CO. There, he spent 17 years working for UNOCAL at the Colorado Parachute Creek Shale Oil Facility as a senior chemist and

environmental specialist. Dr. Pahler received his MPH from the University of Utah in the spring of 2005.

Dr. Pahler is currently an Assistant Professor in the Department of Family and Preventive Medicine, teaching courses in industrial hygiene and hazardous substance management. He enjoys the academic arena with its emphases on education and research and also appreciates the variety of intellects and interests present at RMCOEH with the constant opportunity to learn about and participate in cutting edge research topics.

Dr. Pahler's present projects include bioavailability testing of various elements in the lung, the National Children's Study, and continuing to develop the curriculum for his classes.

Outside of work, Dr. Pahler enjoys swimming, the *Harry Potter* series, and attending concerts and other events.

## Advisory Board Spotlight: Dianne R. Nielson, Ph.D.



**D**ianne Nielson has served on the RMCOEH Advisory Board for over eight years, and is the Executive Director of

the Utah Department of Environmental Quality. DEQ divisions and policy boards implement state environmental programs including air quality, water quality, drinking water, solid and hazardous waste, environmental response and remediation, and radiation control.

As part of the Advisory Board, Dr. Nielson represents DEQ as both the State environmental quality regulatory agency, and an agency which provides rotations for RMCOEH graduate students seeking education in environmental monitoring and compliance.

Prior to her current appointment at DEQ, Dr. Nielson directed the Utah Division of Oil, Gas and Mining for nine years, and served as a member of the Board of Oil, Gas and Mining, the State's

conservation commission. The Division regulates exploration, development and reclamation of oil, gas and mining activities in Utah. She has also served as the Senior Geologist for the Economic Geology Program with the Utah Geological and Mineral Survey, where she supervised research and evaluation of the energy and mineral resources of Utah.

Dr. Nielson is also the CERCLA Trustee for Natural Resources for the State of Utah, responsible for restoration of damaged state resources including groundwater. Other projects under her leadership include coordination of Utah's opposition to the storage of high-level nuclear waste, removal of the Moab uranium tailings from the banks of the Colorado River, destruction of 43% of the nation's stockpile of chemical weapons, and improvement in visibility in the West through the Western Regional Air Partnership.

Besides, RMCOEH, she has chaired or worked on numerous other state and federal commissions and advisory committees dealing with environmental

quality and resource development, including the Western Regional Air Partnership; Grand Canyon Visibility Transport Commission; Environmental Council of States; America's Clean Water Foundation On Farm Assessment and Environmental Review Project; EPA Common Sense Initiative Council; Environmental Advisory Committee for the 2002 Olympic Winter Games; National Research Council Board on Earth Sciences and Resources, Committee on Earth Resources, and various study panels; Interstate Oil and Gas Compact Commission; Western Interstate Energy Board, Coal Reclamation Committee; and Department of the Interior Royalty Management Advisory Committee.

Dr. Nielson is a native of Elgin, Illinois. She earned her Ph.D. and M.A. in geology from Dartmouth College, and B.A. from Beloit College. She is a Licensed Professional Geologist, a Fellow of the Geological Society of America, and a member of the American Association of Petroleum Geologists.

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## State-of-the-Art Conference on Musculoskeletal Disorders

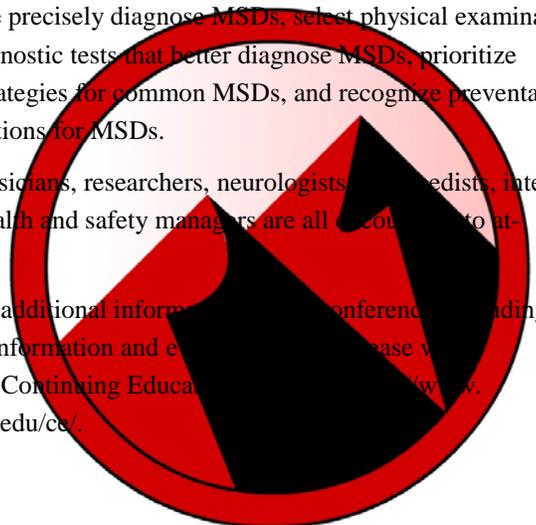
**O**n February 23 and 24, 2006, the University of Utah's Rocky Mountain Center for Occupational and Environmental Health will host the State-of-the-Art Conference on Musculoskeletal Disorders in Salt Lake City.

Musculoskeletal Disorders (MSDs) are the most common reason people see a physician, and the greatest cause of morbidity and disability in the population. However, little has been previously published on these problems. This conference brings together a panel of experts currently conducting multiple, large prospective cohort studies as well as other interventional studies. Participants will receive results from these studies as well as the latest information on diagnostic criteria on the causes/risk factors and preventive strategies for these problems. Information on evidence-based treatments will also be presented.

By the end of the conference, participants will be able to identify risk factors for specific disorders, refine historical features to more precisely diagnose MSDs, select physical examination and diagnostic tests that better diagnose MSDs, prioritize treatment strategies for common MSDs, and recognize preventative interventions for MSDs.

Physicians, researchers, neurologists, epidemiologists, internists, and health and safety managers are all encouraged to attend.

For additional information on the conference, including registration information and e-mail lists, please visit the RMCOEH's Continuing Education page at [www.rmcoeh.utah.edu/ce/](http://www.rmcoeh.utah.edu/ce/).



# Upcoming Continuing Education Classes and Events

## January

- \* Safety Program Management
- \* Asbestos Project Designer Refresher
- \* Asbestos Contractor/Supervisor Refresher
- \* Asbestos Inspector/Management Refresher
- \* OSHA 511: Occupational Safety and Health Standards for General Industry
- \* Fundamentals of Industrial Hygiene
- \* OSHA 503 Update for General Industry Outreach
- \* OSHA 6000 Collateral Duty Course for Other Federal Agencies
- \* OSHA 501: Trainer Course in Occupational Safety and Health Standards for General Industry
- \* Pulmonary Function Testing

## February

- \* CAOHC-Approved Occupational Hearing Conservation Refresher
- \* CAOHC-Approved Occupational Hearing Conservation Refresher
- \* Personality Types and Injuries: Data Statistics & Effective Strategies
- \* Respiratory Protection and Fit Testing
- \* OSHA 502: Update for Construction Industry Outreach Trainers
- \* 18th Annual Compensable Disability Forum: Update 2006
- \* Chemistry of Hazmat: The Basics
- \* OSHA 510: Occupational Safety and Health Standards for the Construction Industry

- \* OSHA 8-Hour Hazardous Waste Refresher Course
- \* State-of-the-Art Conference on Musculoskeletal Disorders
- \* ASP/CSP Comprehensive Review Courses
- \* OSHA 500: Trainer Course in Occupational Safety and Health Standards for the Construction Industry

## March

- \* Industrial Hygiene Program Management
- \* Comprehensive Review of Industrial Hygiene
- \* Introduction to Industrial Hygiene: Professional Practice and Ethics
- \* Sampling & Evaluating Airborne Asbestos Dust (NIOSH 582)
- \* Lead Inspector Refresher
- \* Lead Risk Assessor Refresher
- \* OSHA 3095: Electrical Standards
- \* OSHA 8-Hour Hazardous Waste Refresher Course
- \* Asbestos Contractor/Supervisor Refresher
- \* Asbestos Inspector/Management Planner Refresher
- \* OSHA 40-Hour Hazardous Waste Operations Course (HAZWOPER)
- \* Indoor Mold Contamination: Inspecting & Assessing the Risk
- \* Indoor Mold Contamination: Choosing & Supervising the Proper Remediation

For additional information on CE classes, please visit the continuing education section of the RMCOEH website: <http://rocky.utah.edu/ce/index.html>

## Utah

## Worker's Compensation Fund Scholarship Re-



Christiane Lantagne, MD, MPH  
Occupational Medicine

In June, the Workers Compensation Fund awarded five RMCOEH graduate students the Dr. Paul S. Richards Safe Workplace Scholarship. The WCF began the Scholarship Program in 1997 to help facilitate the education and training of individuals committed to a career of keeping workplaces safe and protecting workers. Scholarships were awarded to the following graduate students in the fields of occupational medicine, safety and ergonomics, and industrial hygiene: Christiane Lantagne, Juan Carlos Rodriquez, Susanne Thobe, Andrew Merryweather, and John Kamas.



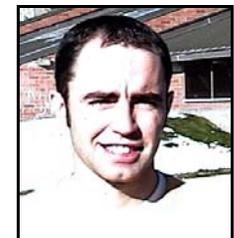
John Kannas  
Industrial Hygiene



Juan Carlos Rodriguez  
Ergonomics & Safety



Susanne Thobe, MD, MPH  
Occupational Medicine



Andrew Merryweather  
Ergonomics & Safety



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## Low Back Pain: One Month Period Prevalence in An Occupational Cohort

**L**ow Back Pain (LBP) is a common disorder that affects a large percentage of people sometime in their life. We have access to data from a large multi-center occupational cohort study (n=586) of 29 plants from Utah, Wisconsin, and Texas.

All participants underwent a detailed questionnaire, structured interview, and 2 standardized physical exams. The study population is 66.0% male. The mean body mass index (BMI) is  $29.6 \pm 6.2$  kg/m<sup>2</sup> and the mean age is  $38.0 \pm 17.5$  years. Among participants, 21.2% were former smokers, 22.9% were current smokers, 13.8% had a history of hypertension, 3.7% were diabetic, and 15.4% had high cholesterol.

The one month period prevalence of LBP is 35.5% as determined by self report of pain in the past month which lasted longer than 24 hours and a pain rating of two or higher out of ten.

Univariate analyses indicate that currently smoking puts individuals at a higher risk of having LBP [Odds Ratio (OR)=1.75, 95% Confidence Interval (95%CI) 1.20, 2.57], having family problems that bother them (OR=2.45, 95% CI 1.12, 5.39), having low co-worker support (OR=1.83, 95% CI 1.12, 2.97), feeling mentally exhausted (OR=2.79, 95% CI 1.31, 5.93), dislike of tasks of the job (OR=1.63, 95% CI 1.10, 2.41), and feeling tired (OR=2.80, 95% CI 1.24, 6.33). These data indicate that there is a significant relationship between psychosocial factors and the prevalence of LBP.

This study is ongoing and we will be analyzing incidence data in the months to come. The job physical factors are a major study component, requiring hundreds of hours of analysis, and are nearing completion.