National Occupational Research Agenda

Volume 1 • Number 3 • Fall 1998

NIOSH NORA Grant Awards Announced

The National Institute for Occupational Safety and Health (NIOSH) has awarded 37 competitive research grants in several priority areas under the National Occupational Research Agenda (NORA) (see listing on page 4). The award of the 37 grants is part of the single largest infusion of funding ever by the federal government for extramural occupational health and safety research.

The NIOSH grants, totaling \$5.4 million, will fund projects in the NORA-related areas of occupational irritant dermatitis, work-related musculoskeletal disorders, traumatic injuries, indoor environment, asthma and chronic obstructive pulmonary disease, special risk factors for older and/or minority workers, social and economic consequences of workplace injury and illness, health services research, and research to evaluate existing or new interventions.

"We are pleased to make this historic commitment to expanding first-class occupational health and safety research,"

said NIOSH Director Linda Rosenstock, M.D., M.P.H. "We were delighted by the tremendous number and diversity of excellent proposals we received, and we look forward to building on this initial investment in critically needed science. The high quality of these studies offers further proof that NORA is key for stimulating the new research needed to address the multibillion-dollar problem of workplace injury and illness."

Message from NIOSH

We have exciting NORA funding news to report in this issue. In October, the National Institute for Occupational Safety and Health awarded 37 NORA research grants, part of the single largest infusion of funding ever by the federal government for extramural occupational health and safety research (*see article at left*). We received many qualified applications that we were not able to fund due to our limited resources. Many applicants have revised their proposals and are submitting them through our regular grants program. Watch for future announcements from NIOSH on the FY 99 NORA grants process.

NIOSH has received continued Congressional support for NORA. The FY 1999 Omnibus appropriations bill provides \$200,000,000 for NIOSH, \$12,787,000 more than the FY 1998 appropriation. Much of this increase is to implement the National Occupational Research Agenda. Congressional support for NORA is evident in the following language included in the Senate report accompanying the FY 1999 NIOSH appropriation.

"The Committee is encouraged with the progress by NIOSH on implementing the National Occupational Research Agenda (NORA). The Committee is supportive of NIOSH's efforts to further its partnerships with the occupational safety and health community and the broader public and private public health research community, and believes these partnerships will be important in the implementation phase. The Committee urges NIOSH to work with its partners to augment resources available to the Institute for NORA research. In particular, the Committee strongly encourages NIOSH to continue partnering with the National Institutes of Health to cosponsor and fund extramural research in relevant NORA priority areas."

We are enthused by these developments and look forward to funding research in additional NORA areas in FY99.

Linda Rosenstock, M.D., M.P.H.

Director



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Injury Team Releases Report; Other

Team Products in the Works

Injuries exact a huge toll in U.S. workplaces—on a typical day, an estimated 16 workers are killed and 36,000 are injured. Clearly, more research on occupational injuries is needed. The NORA Traumatic Injury Team, composed of seven NIOSH researchers and six external members representing labor, industry, government, and academia has done an excellent job in articulating the direction that research should take in their report, Traumatic Occupational Injury Research Needs and Priorities. The report, which was published in July, presents a broad framework of the objectives and research needed to begin filling the gaps in knowledge and furthering progress toward safer workplaces and practices. The NORA Traumatic Injury Team emphasizes the need for relevant data collected through new methods, as well as collaboration among partners and the use of the public health model using an interdisciplinary approach.

Other NORA Partnership Teams are also working on similar reports or white papers—documents that summarize the research in a priority area, define gaps, and lay out opportunities for collaboration. In some areas, a well-defined research agenda currently exists (for example in asthma research) so a white paper is not necessary. The following 11 NORA Teams have completed or are currently writing white papers: Control Technology and Personal Protective Equipment, Emerging Technologies, Health Services Research, Hearing Loss, Indoor Environment, Intervention Effectiveness Research, Mixed Exposures, Musculoskeletal Disorders, Organization of Work, and Surveillance Research Methods, and Traumatic Injuries.

As the 20 NORA Teams continue to implement the Agenda, each team is proceeding somewhat differently. While some teams are working on white papers, others are pursuing conferences and workshops, which are popular and effective ways for NORA Teams to crystalize research needs and communicate with their partners. In FY97, NIOSH and its partners sponsored four major meetings related to NORA as a whole or to specific priority areas. Ten such meetings were held in FY98, most recently the Research Workshop on the Risks and Benefits of Exposure to Ultraviolet Radiation and Tanning held at NIH September 16-18. A number of meetings are scheduled for FY99, including the NORA Symposium 1999: Partnership for Research on May 14 at the National Academy of Sciences. Upcoming issues of NORA News will announce similar conferences and also provide summaries of major meetings.

In addition to white papers, conferences, and workshops, teams are also developing surveys, establishing graduate-level training programs, participating in continuing education workshops, and developing documents. The NORA Organization of Work Partnership Team, for instance, is collaborating with the American Psychological Association to establish new graduate-level training programs in work organization and health and to focus a major APA-NIOSH scientific conference in March 1999 around the topic of work organization. Another example of NORA Team products is the Asthma and Chronic Obstructive Pulmonary Disease Team's effort to include blood samples for natural rubber latex antibody to be analyzed at NIOSH in the 4th National Health and **Nutrition Examination Survey** (NHANES), organized by CDC's National Center for Health Statistics.



These examples provide a flavor of the products that the 20 NORA Partnership Teams have produced thus far and will continue to pursue. Such products will not only advance research in the NORA priority areas, but will also serve as excellent measures to track the success of NORA in the third year of implementation.

To request a copy of the *Traumatic Occupational Injury Research Needs and Priorities* document, call 1-800-35-NIOSH and reference DHHS (NIOSH) Publication No. 98-134.

The document can also be found on Traumatic Injury section of the NORA web site at http://www.cdc.gov/niosh/traumado.html.

NORA Symposium

The NORA Symposium
1999: Partnership for Research
will take place on May 14, 1999
at the National Academy of
Sciences in Washington, D.C.
Look for more information in
upcoming newsletters.

Grant Awards Related to the National Occupational Research Agenda (NORA) - Grouped by NORA Priority Area

Dermatitis

Role of Vernix as A Natural Biofilm and Epidermal Protectant (\$63,000) Hoath, Steven, M.D. Children's Hospital Research Foundation, Cincinnati, Ohio

Prediction of Irritation Based in Exposure Duration (\$245,082) McDougal, James, Ph.D. Wright State University, Wright-Patterson Air Force Base, Ohio

Priming of Human T Lymphocytes (\$40,500) Streilein, J. Wayne, M.D. Schepens Eye Research Institute,

In Vitro Assay for Hapten-Specific

Health Services

Boston, Mass.

Evidence-Based Medical Examinations for Firefighters (\$184,197) Kales, Stefanos, M.D. Harvard University, Boston, Mass.

Indoor Environment

Prevention of IEQ-Related Absence: An Intervention Study (\$249,952) Milton, Donald, M.D., Ph.D. Harvard University, Boston, Mass.

Microanalytical System for Indoor VOC Monitoring (\$267,910) Zellers, Edward, M.D., Ph.D. University of Michigan, Ann Arbor, Mich.

Intervention Effectiveness

Organizational Predictors of Successful Return to Work (\$261,595) Amick, Benjamin, Ph.D. New England Medical Center, Boston, Mass.

ROPS Design and Testing for Agricultural Tractors (\$136,160) Ayers, Paul, Ph.D. Colorado State University, Fort Collins, Colo. Leadership Intervention for Fire Service Personnel (\$143,691) Beaton, Randal, Ph.D.

University of Washington, Seattle, Wash.

A New Training Intervention to Prevent Back Injuries (\$224,026) Lavender, Steven, Ph.D. Rush-Presbyterian-St. Luke's Medical Center, Chicago, Ill.

Work Organization and Depression Among Nursing Home Aides (\$106,923) Muntaner, Carles, M.D., Ph.D. University of West Virginia, Morgantown, W.V.

Health & Safety-Pollution Prevention in Hospitals (\$240,691) Quinn, Margaret, Sc.D. University of Massachusetts Lowell Lowell, Mass.

Field Study of Hearing Protector Evaluation Procedure (\$38,897) Rimmer, Thomas, Sc.D. University of Arkansas, Little Rock, Ark.

Getting to Zero in Nursing Homes: Intervention Effectiveness (\$110,499) Silverstein, Barbara, Ph.D., M.P.H., C.P.E.

Department of Labor and Industries Olympia, Wash.

The Buffalo Police Health Study: A Baseline Evaluation (\$76,986) Violanti, John, M.A., Ph.D. University of Buffalo, Buffalo, N.Y.

Lung Disease

A Novel Mouse Model of Isocyanate-Induced Asthma (\$81,750) Bottomly, Kim, Ph.D. Yale University, New Haven, Conn.

Respiratory Disease Among Sawmill Workers (\$44,133) Demers, Paul, Ph.D. University of British Columbia Vancouver, B.C., CANADA Pulmonary Effects of Machining Fluid Aerosols (\$213,038) Gordon, Terry, Ph.D. New York University Medical Center, Tuxedo, N.Y.

Estimation of Highest Task Silica Exposures (\$35,037) Grimsley, L. Faye University of Cincinnati, Cincinnati, Ohio

Passive Sampler for Particles (\$35,066) Leith, David, Sc.D. The University of North Carolina at Chapel Hill, Chapel Hill, N.C.

Development of New Personal Aerosol Samplers (\$139,449) Vincent, James, Ph.D., D.Sc. University of Michigan, Ann Arbor, Mich.

Musculoskeletal Disorders

An Intervention to Reduce Disability in Injuries Workers (\$249,056) Evanoff, Bradley, M.D. Barnes-Jewish Hospital, St. Louis, Mo.

Quantifying the Use of Keyboard/ Mouse through Intranet (\$62,877) Lui, Wen Chen, Ph.D. University of California at Los Angeles Los Angeles, Calif.

CTS Incidence & Correlates of Worker's Compensation Claims (\$74,000)

Punnett, Laura, Sc.D. University of Massachusetts Lowell, Lowell, Mass.

An Animal Model for Repetitive Finger Loading (\$63,000) (Announcement of this award is pending)

MSDs in Nurses: Organization and Physical Work Factors (\$221,323) Trinkoff, Alison, Sc.D. University of Maryland, Baltimore, Baltimore, Md.

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Grant Awards...

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Social and Economic Consequences

The Employment Impact of Workplace Injuries in 5 States (\$249,977) Boden, Leslie, Ph.D. Boston University, Boston, Mass.

Functional Limitation & Recovery from At-Work Injuries (\$44,657) Gillen, Marion, Ph.D. University of California, San Francisco San Francisco, Calif.

Special Populations

Green Tobacco Sickness in Minority Farmworkers (\$236,910) Arcury, Thomas, Ph.D. The University of North Carolina at Chapel Hill, Chapel Hill, N.C. Collecting Elusive Data on Immigrant Occupational Health (\$74,000) Levenstein, Charles, Ph.D. University of Massachusetts, Lowell, Mass.

Factors Affecting the Health of Employed Pregnant Women (\$242,801) Luchok, Kathryn, Ph.D. University of Kentucky Research Foundation, Lexington, Ky.

Hispanics and Noise-Induced Hearing Loss (\$62,384) Rabinowitz, Peter, M.D. Yale University, New Haven, Conn.

Traumatic Injuries

On-The-Job Injury in South Texas Middle School Children (\$72,770) Cooper, Sharon, Ph.D. The University of Texas, Houston, Tex. Etiology of Injury in Drywall and Residential Carpentry (\$249,951) Lipscomb, Hester Duke University, Durham, N.C.

A Case Crossover Study of Occupational Hand Injuries (\$221,544)

Mittleman, Murray, M.D., Ph.D. Harvard University, Boston, Mass.

Impact of Time and SCBA Tank Utilization on Injury Prevention in Fire Fighters (\$238,685) Prezant, David , M.D. Montefiore Medical Center, Bronx, N.Y.

Adolescent Toxic Exposures in the Workplace (\$82,500) Woolf, Alan, M.D. Children's Hospital, Boston, Mass.

NORA Federal Liaison Committee

Consumer Product Safety Commission

Department of Agriculture

Cooperative State Research, Education and Extension Service

Department of Defense

Department of Energy

Office of the Environment, Safety and Health

Department of Health and Human Services

Agency for Health Care Policy and Research

Agency for Toxic Substances and Disease Registry

Centers for Disease Control and Prevention

- -Epidemiology Program Office
- -National Center for Chronic Disease Prevention and Health Promotion
- -National Center for Environmental Health
- -National Center for Health Statistics
- -National Center for HIV, Sexually Transmitted Disease, and TB Prevention
- -National Center for Infectious Diseases
- -National Center for Injury Prevention and Control
- -National Immunization Program
- -Office of Minority Health
- -Office of Women's Health

Food and Drug Administration

Health Resources and Services Administration

Office of Intergovernmental Affairs

National Institutes of Health

- -Fogarty International Center
- -National Cancer Institute
- -National Center for Sleep Disorders

- -National Heart, Lung, and Blood Institute
- -National Institute of Allergy and Infectious Diseases
- -National Institute of Arthritis and Musculoskeletal and Skin Diseases
- -National Institute on Aging
- -National Institute on Deafness and Other Communication Disorders
- -National Institute of Environmental Health Sciences
- -National Institute of Mental Health
- -National Institute of Neurological Disorders and Stroke
- -National Institute of Nursing Research Substance Abuse and Mental Health Services Administration

Department of Labor

Bureau of Labor Statistics

Mine Safety and Health Administration

Occupational Safety and Health Administration

Wage and Hour Division

Department of Transportation

Federal Aviation Administration

Federal Highway Administration

National Highway Traffic Safety Administration

Department of Veterans Affairs

Environmental Protection Agency

National Exposure Research Laboratory

Office of Prevention, Pesticides, and Toxic Substances

Executive Office of the President

Office of Science and Technology Policy

Partner Perspective

David Brown, MPH

Scientific Review Administrator

Scientific Review Branch, Division of Extramural Research and Training.

National Institute for Environmental Health Sciences NORA Federal Liaison Committee

While NIOSH is the primary agency conducting occupational safety and health research (and the only one mandated to conduct this research) other organizations, by virtue of their area of expertise, have research projects that relate to the workplace. NORA has provided a long overdue mechanism for coordination between federal agencies conducting occupational safety and health research. The Federal Liaison Committee is an active interagency working group that was involved in the creation of NORA and is playing a key role during NORA's implementation. The Committee represents over 40 federal programs and the Executive Office of the President (see listing below).

The members of the Committee helped coordinate the \$8 million of FY 98 research grants in NORA priority areas and are working with NIOSH to release the FY 99 request for applications for additional research. By pooling resources, many organizations are able to fund research collectively that would otherwise not be possible.

The Federal Liaison Committee also conducted the first-ever survey of Federal occupational safety and health research. The survey revealed that in FY 96, \$15 million was spent on research in NORA priority areas by non-NIOSH Federal organizations. The Federal Liaison Committee is committed to performing the survey bi-annually to track changes in Federal investments. The next survey will be conducted in FY 99 and will assess FY 98 expenditures. This information can be used in a variety of ways and is particularly helpful in measuring the success of NORA.

The Committee has decided to use NORA as a vehicle for improving communication between the agencies and informing one another about research and programmatic interests. In a first step towards achieving this new goal, three members of the Committee (Paul Knechtges, DOD; Paul Selligman, DOE; and Gayle Weinmann NIH;) made presentations to the group at the October 19th Federal Liaison Committee meeting.

The Federal Liaison Committee believes that even in the early years of implementation, NORA is already demonstrating its value. In addition to its broad ramifications for occupational safety and health research and public health partnerships, NORA is providing a vehicle for communication between Federal agencies conducting related research and is helping to fund coordinated research within the NORA priority areas. We look forward to our continuing involvement in this crucial national process.

NIOSH Announces...

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Among the studies funded under the 37 NIOSH grants are projects relating to traumatic occupational injuries in teen workers, physical movements in the use of the computer mouse and keyboard, hazards to employees in the expanding health-care industry, job-related asthma, indoor air quality, workplace risks in growing populations of immigrant and minority workers, testing of a miniaturized sampling device designed to improve the measurement of airborne particles linked with costly lung diseases, and refinement and testing of a new method that may improve worker hearing protection.

The grants include NIOSH's portion of funds announced in a March 1998 Request for Applications under NORA with the National Institute of Aging (NIA), the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS), the National Institute of Environmental Health Sciences (NIEHS), and the National Heart, Lung, and Blood Institute (NHLBI) in the National Institutes of Health. The new grants

are supported by funds specifically provided by Congress in NIOSH's fiscal 1998 appropriation for research under NORA. Fianl decisions are pending on NIH funding for several proposals. Total funding, including the NIH support, is anticipated to be \$8 million.



NORA Upcoming Events

March

March 11-13

Work, Stress, and Health '99: Organization of Work in a Global Economy

Location: Hyatt Regency Baltimore on the Inner Harbor, Baltimore, Maryland

Sponsors: American Psychological Association and

NIOSH

Contact: Wes Baker, APA Conference Coordinator, (202)336-6033 or web site http://www.apa.org/pi/wpo/niosh.html

April

April 26

American Thoracic Society International Conference
"The National Occupational Research Agenda in 1999:
Highlights from NIOSH and Collaborative
Occupational Lung Disease Research" - lunchtime
program

San Diego, California

Contact: Greg Wagner, NIOSH, (304) 285-5749

May

May 14

NORA Symposium 1999: Partnership for Research National Academy of Sciences, Washington, DC

Sponsor: NIOSH

Contact: Retina Holmes, NIOSH, (202) 401-0721

June

June 14-15

Functional, Economic, and Social Outcomes of Occupational Injuries and Illnesses: *Integrating Social, Economic, and Health Services Research* Denver, Colorado

Contact: Elyce Biddle, NIOSH, (304) 285-6015 or Scott Deitchman, NIOSH, (404) 639-1534

Team Leader News

Sherry Baron has assumed the responsibilities of team leader for the Special Populations at Risk priority research area. We thank Gwen Cattledge for her past leadership and know she will continue to make important contributions as a member of the team. Sherry can be reached at (513) 841-4386 or by e-mail at slb8@cdc.gov.

Tom Waters will serve as co-chair for the Musculoskeletal Disorders Team while Larry Fine is on detail conducting research at the University of California at Berkeley. Tom can be reached at (513) 533-8147 or by e-mail at trw1@cdc.gov.

Paul Schulte will serve as co-chair of the Cancer Research Methods Team while Liz Ward is on detail to International Agency for Research on Cancer. Paul can be reached at (513) 533-8302 or by e-mail at pas4@cdc.gov.

Tom Hodous has assumed the responsibilities of team leader for the Infectious Diseases team. We thank Bob Mullan for his work as team leader and are happy that he will remain on the team as a representative from the National Center for Infectious Diseases. Tom can be reached at (304) 285-5943 or by e-mail at thh1@cdc.gov. ■

Innovations in American Government

The NIOSH initiative for control of asphalt fumes during paving was selected as a finalist in the prestigious Innovations in American Government Awards Program. Although not selected as a winner, the program was considered one of the seven most innovative federal programs in the nation.



Delivering on the Nation's promise: Safety and Health at work for all people through research and prevention

For more information on NORA
contact NIOSH at:
1-800-35-NIOSH
(1-800-356-4674)
or visit the NIOSH Homepage at:
http://www.cdc.gov/niosh/norahmpg.html