



DRAFT

**Office of Extramural Programs
Program Report
Fiscal Year 2005**



Foreword

May 17, 2006

Dear Colleagues,

I am pleased to provide the annual report for the Office of Extramural Programs (OEP), National Institute for Occupational Safety and Health. This fiscal year (FY) was marked by the launching of our Research to Practice (r2p) initiative which is a focused effort to systematically translate our research results into the work environment. This effort will help NIOSH identify promising interventions and technologies to reduce occupational risks and will provide a framework for focusing our resources on the most promising projects.

OEP will continue efforts to ensure extramural research and training programs have an r2p vision. In addition, this year, the state-based surveillance programs were brought together into a single program that will help identify occupational risk factors. Through this program, awarded states will conduct core surveillance of priority conditions in the same manner which will enable the states to combine and compare data in a more effective and comprehensive manner. In addition, some of the states have funding to focus on priority health conditions that are specific to their regions such as pesticide risks or have a national focus such as fatality investigations of priority events.

As we reach the second decade of NORA, NIOSH will focus on moving research to practice in workplaces through a sector based research program. This approach will address the most important problems in each sector (risks, exposures, injuries, diseases, and occupational safety and health system failures). We will also continue to promote the translation of research products to the practitioner environment.

Best regards,
Michael J. Galvin, Ph.D.
Director, OEP
National Institute for Occupational Safety and Health

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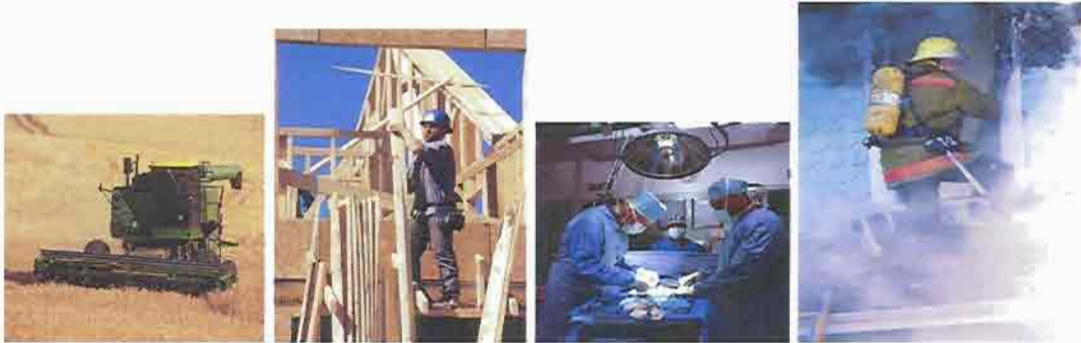
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Extramural Funding Priorities

The National Institute for Occupational Safety and Health (NIOSH) was established in 1970 to conduct research and to make recommendations for protecting worker safety and health in the United States. NIOSH is part of the Centers for Disease Control and Prevention (CDC).

The NIOSH vision:

Delivering on the Nation's promise: safety and health at work for all people through research and prevention.



While the overall mission of NIOSH is to prevent injury, illness, and deaths caused by hazards in the workplace, it cannot accomplish this goal on its own. NIOSH recognizes that extramural scientists have valuable contributions to make to fulfill the NIOSH mission. The creativity and resources available in the scientific community make the extramural program an important component in achieving safe jobs and healthy workers.

NIOSH funds programs that:

- Are relevant to our research priorities
- Are of the highest scientific quality
- Have an impact on worker health and safety

The following sections outline two broad priorities that are taken into consideration when NIOSH makes funding decisions.

NORA

In 1996, NIOSH created the National Occupational Research Agenda (NORA) in collaboration with our partners in academia, government agencies, professional organizations, and private industry. NORA allows NIOSH to focus resources on a coordinated occupational safety and health research agenda. In establishing NORA, NIOSH and our partners created a framework that has guided occupational safety and health research to this day. For more information about NORA, please visit the NIOSH Web site at: <http://www2a.cdc.gov/NORA/default.html>

Table 1 displays the NORA priority research areas.

Table 1 - NORA Priority Areas

Category	Priority Research Area	NORA Code
Disease and Injury	Allergic and irritant dermatitis	N01DE
	Asthma and chronic obstructive pulmonary disease	N02LD
	Fertility and pregnancy abnormalities	N03RD
	Hearing loss	N04HL
	Infectious diseases	N05ID
	Low-back disorders	N06MB
	Musculoskeletal disorders of the upper extremities	N07MU
	Traumatic injuries	N08TI
Work environment and workforce	Emerging technologies	N09ET
	Indoor environment	N10IE
	Mixed exposures	N11ME
	Organization of work	N12OW
	Special populations at risk	N13SP
Research tools and approaches	Cancer research methods and approaches	N14CR
	Control technology and personal protective equipment	N15CT
	Exposure assessment methods	N16EA
	Health services research	N17HS
	Intervention effectiveness research	N18IN
	Risk assessment methods	N19RA
	Social and economic consequences of workplace illness and injury	N20EC
Surveillance research methods	N21SU	

To extend NORA beyond the first ten years, NIOSH has created a Program Portfolio that is organized into eight (8) NORA Sector Programs that represent industrial sectors, and fifteen (15) cross-sector programs organized around adverse health outcomes, statutory programs and global efforts. In addition to these program areas, NIOSH has identified seven (7) Coordinated Emphasis Areas that support the Sector and Cross-Sector Programs. <http://www.cdc.gov/niosh/programs/>

Table 2 – Program Portfolio

Code	Category	Program
AG	Sector	Agricultural, Forestry and Fishing
CO	Sector	Construction
HS	Sector	Healthcare, Social Assistance (incl HS Res)
MA	Sector	Manufacturing
MN	Sector	Mining
PS	Sector	Public and Private Services

TD	Sector	Trade
TU	Sector	Transportation, Warehousing and Utilities

Research To Practice (r2p)

NIOSH extramural programs are also being driven by an emphasis on “Research To Practice”. This new NIOSH initiative is focused on the transfer and translation of research findings, technologies, and information into highly effective prevention practices and products which are adopted in the workplace. The goal of r2p is to reduce illness and injury by increasing workplace use of effective NIOSH and NIOSH-funded research findings. In order to achieve this, NIOSH is continuing to work with our partners to focus research on ways to develop effective products, translate research findings into practice, target dissemination efforts, and evaluate and demonstrate the effectiveness of these efforts in improving worker health and safety. For more information on r2p, please visit the NIOSH Web site at:<http://www.cdc.gov/niosh/r2p/>.

Office of Extramural Programs

To facilitate and oversee extramural programs, NIOSH has established an Office of Extramural Programs (OEP). OEP is located within the NIOSH Office of the Director in Atlanta, GA. OEP administers grants and cooperative agreements to extramural occupational safety and health researchers. NIOSH develops extramural programs based on the NORA agenda, r2p initiatives, congressional mandates, and other emerging occupational safety and health priorities.

The OEP mission is:

To lead and support national occupational safety and health programs to reduce work-related injuries and illnesses through diverse quality-driven extramural research, education, and training in collaboration with world-wide partners.

OEP is made up of three main components: Scientific Review; Research and Research Training Program Administration; and Program Analysis/Translation. More information about OEP, including a staff directory, can be found at the following Web site:

<http://www.cdc.gov/niosh/oep/about.html>

In conjunction with OEP, the CDC Procurement and Grants Office (PGO) performs the business and financial administration for extramural grants and cooperative agreements.

In addition to performing the administration of grant awards, OEP conducts outreach activities that enhance the NIOSH relationship with the extramural occupational safety and health community, other CDC centers and institutes, and other federal agencies.

Highlights of FY 2005 outreach activities include:

- NIOSH is committed to increase the diversity of our research applicant pool. In FY2005 a funding opportunity announcement was published to provide a mechanism for existing grantees to add underrepresented researchers to participate in their grant.
- NIOSH OEP participated in the formulation of revised program priorities. The use of these priorities will be further refined in FY 2006 via meetings with stakeholders across the country.
- OEP published Requests for Applications (RFAs) in the following targeted areas: Mining Occupational Safety and Health Research, Occupational Exposure Risk

on Reproduction/Development, Environmental and Human Health Effects of Manufactured Nanomaterials, Partnership for Environmental Justice Communication, Healthier Workforce, and Interaction of Risk Factors for Musculoskeletal Disorders.

- Applications were received for ongoing announcements (program announcements) including training grants, small grants, exploratory/developmental grants, investigator-initiated grants, career development grants, state-based surveillance grants, support for conferences and small business grants.
- Peer review was completed for 589 grant applications, many of which were multi-project applications. NIOSH OEP developed and refined a new model for center grant applications, which is being implemented in FY 2006 for the Agricultural, Education and Research, Healthier Workforce, and Surveillance Centers.

Looking to the future, OEP plans several activities for FY 2006 including a second year of Environmental and Human Health Effects of Manufactured Nanomaterials, Prevention of Airborne Infections, Workplace Violence Prevention, and National Mesothelioma Virtual Registry and Tissue Bank. The ongoing program announcements will continue.

Extramural Research Programs – Emphasis Areas

In FY 2005, NIOSH administered 258 grant and cooperative agreement awards, with a total funding level of \$100,097,917. Other awards ended in FY2005, and six of them are highlighted later in this report as examples of success stories. Also included are listings of all grants and cooperative agreements funded in FY 2005 (Tables 7 and 8).

The awards covered a wide range of programs, including the following emphasis areas:

Agriculture

Agriculture consistently ranks as one of the most hazardous industries in the United States. There were approximately 26 deaths per 100,000 workers in the agricultural sector (agriculture, forestry, and fishing) in 1999. The average annual fatality rate for the United States civilian working population for this same time was approximately 5 deaths per 100,000 workers. Of special concern are the children (over 100) killed each year while involved in farm activities.

NIOSH provides funding for outreach, prevention, intervention, education, and research projects to address the nation's agricultural safety and health issues. In FY 2005, 14 agriculture research projects, 6 child agriculture research projects, 1 multi-disciplinary child agriculture center, and 9 multi-disciplinary agriculture centers were funded.

Construction

NIOSH began a program on construction safety and health in 1990. This program developed a national infrastructure to address issues affecting workers in the construction industry. The reduction in traumatic injury rates among construction workers since 1990 suggests that the program has had some impact. Despite these efforts, construction remains one of the industries with a higher rate of work-related injuries than any other industry. Furthermore, the construction fatality rate has not declined over the past

decade. The construction environment involves a large number of work settings, numerous small companies, and complex work organization with multiple employers and trades at one worksite. These factors make it a challenge to improve safety in the construction industry.

Projects funded by NIOSH address the complex and evolving health and safety issues in the construction sector. In FY 2005, 2 construction research projects, 1 multi-disciplinary construction program project, and 1 multi-disciplinary construction center were funded.

Education and Training

NIOSH conducts a competitive training grant program aimed at increasing the number of professionals and paraprofessionals trained to work in the occupational safety and health field. In FY 2004, NIOSH supported a network of 16 Education and Research Centers (ERCs) and 39 Training Project Grants (TPGs) across the country.

NIOSH training grants support academic programs that enable students to obtain specialized training in disciplines such as occupational medicine, occupational health nursing, industrial hygiene, occupational safety, and closely related disciplines. In addition, ERCs and some TPGs provide continuing education for Occupational Safety and Health (OSH) professional development for approximately 30,000 trainees annually. These continuing education programs have a strong impact on the occupational safety and health practitioner environment. ERCs have a regional focus and are able to respond to workplace training needs throughout the country. Because they provide training that is multidisciplinary, ERCs combined with TPGs graduate professionals who are trained to protect workers from exposure to hazards in virtually every aspect of the workplace.

Mining

Despite many technological and work environment advances, mining remains one of the most dangerous occupations in the United States. The fatality rate is six times higher than the national average for other industries. The severity of injuries for mining exceeds all other industries with the highest percentage of lost work days per incident.

Projects funded by NIOSH investigate the broad issues of mining safety and health through population-based or laboratory research. Areas of focus include: (1) powered-haulage equipment injuries; (2) assessment of safety interventions; (3) reduction of injuries from materials handling; (4) hearing loss prevention; (5) diesel exhaust exposure; and (6) other mine safety and health topics. In FY 2005, 8 mining research projects and 1 multi-disciplinary mining center were funded.

Small Business Innovation Research (SBIR)

Small biotechnology firms represent a unique national resource for economic and scientific growth. The SBIR program empowers small firms to convert cutting edge biomedical research into new technology breakthroughs and competitive new products that will benefit public health. With SBIR funding, company scientists can pursue innovative projects for which company support may not be available, and academic investigators can access company resources, thus achieving a partnership with long term financial and scientific benefits. In FY 2005, NIOSH funded 6 SBIR grants. The grants' subject matter ranges from work injury risk reduction tool for detection of MSDs, escape

respirators for first responders, enhanced management of ethylene oxide sterilizer, miniature personal noise dosimeter and reality simulator for forklift safety training.

Surveillance

In collaboration with many of its partners, NIOSH has established surveillance programs to help describe the magnitude of occupational hazards, diseases, injuries and deaths in the United States. These surveillance activities have often documented the Nation's progress in reducing the burden of work-related diseases and injuries. They have also identified many old and new problems that require additional research and prevention efforts. Such efforts include translation into the workplace of successful intervention approaches.

The intended benefit of supporting surveillance programs is to increase the level of prevention activity in the state. Data are collected to estimate the magnitude and trend of the selected occupational conditions. Although significant accomplishments have been made in occupational health and safety surveillance in the United States, there are still data gaps. To address these gaps, NIOSH and collaborators have developed strategic goals for a surveillance program. The goals are as follows:

- Advance the usefulness of surveillance information at the Federal and state level for the prevention of occupational illnesses, injuries, and hazards.
- Strengthen the capacity of state agencies to conduct occupational surveillance.
- Strengthen surveillance of high-risk industries and occupations, and of populations at high risk, including special populations.
- Promote effective occupational health and safety surveillance conducted by employers, unions, and other non-governmental organizations.

In FY 2005, 29 state based surveillance projects and 4 surveillance research projects (of which one is in the NORA area of Research Surveillance Methods [5R01OH007830-03]) were funded.

State	PI Name	Fundamental	Pesticide	Asthma	Silicosis	Traumatic Injuries/Teens	Sharps injuries to Healthcare Workers	Work Related Injuries & Illnesses/HCW	Burns	Fatality	MSD
WI	Anderson	X									
OK	Archer	X									
KY	Auslander	X								X	
WA	Bonauto	X	X							X	X
MA	Davis	X		X		X	X	X		X	
LA	Dugas	X									
NY	Gelberg	X	X							X	
CA	Harrison	X	X	X						X	
OR	Heumann	X							X	X	
NM	Mulloy	X									
MI	Rosenman	X	X	X	X					X	
CT	St. Louis	X									
NJ	Valiante	X		X	X					X	
IA	Gergely	X	X							X	
TX	Villanacci	X	X								
CSTE											

World Trade Center

Following the collapse of the World Trade Center (WTC) on September 11, 2001, thousands of responders, workers and volunteers were called upon to provide rescue, recovery, clean-up, and restoration of essential services. In 2002, NIOSH initiated a comprehensive medical screening program for these responders, one for New York City firefighters, and one for all other responders. These programs were continued in 2004 and provide follow-up health assessments for the responders through Clinical Centers (CCs). The CCs provide patient tracking, clinical screening, basic mental health assessments, patient data management, and referral to physicians for patients requiring follow-up care. In addition, as the program has grown, two Data and Coordination Centers will provide study coordination functions, data management support services, and other services. Data from this program will help define the long term health care needs for the responder population, and also provide important information on the consequences of air pollutants, physical stressors, emotional stress, musculoskeletal exertions, and other occupational and environmental measures.

Through this fiscal year, over 28,000 initial screenings have been conducted and over 12,000 monitoring exams have been completed. Results from these programs indicate elevated rates of persistent upper and lower respiratory and mental health conditions. As these programs move forward, it is anticipated that the health impact on the WTC responders, workers and volunteers will become clearer. In FY 2005, 8 grants were funded

Life Cycle of a NIOSH Grant/Cooperative Agreement

The work that OEP and our grantees perform follows a standard life cycle. Each year this life cycle involves the establishment of partnerships and the documentation of accomplishments of extramural partners. The life cycle involves five major phases: (1) program planning; (2) announcement development; (3) application receipt, referral, and two-step peer review; (4) award; and (5) post-award monitoring and closeout. Brief descriptive information about these phases is outlined below. More information on this life cycle and the grants process can be found on the NIOSH OEP Web site at:

<http://www.cdc.gov/niosh/oep/>

Planning

In order to allow sufficient time to complete the grants process and distribute the workload throughout the year, planning is done well in advance of the fiscal year in which funding will occur. Such planning takes account of the prior and existing grants portfolio, new priorities, and anticipated funding level. The plan sets in motion the following phase of the life cycle.

Announcement Development

Funding Opportunity Announcements (FOA) are developed as a part of the program planning process, and they contain all the information that a potential applicant needs in order to compete for funding. There are two main types of announcements: Request for Applications (RFA) and Program Announcement (PA). The RFA targets a specific research area. It is open for one application cycle with a single published application receipt date. The PA is broader in scope, in that it describes multiple priority research

areas and allows the applicant to propose a variety of research within those areas. A PA is usually open for applications for a three-year period, and the application receipt dates follow a standardized schedule, with three receipt dates per year. Occasionally, a PA will contain one published deadline date per year. It is very important that potential applicants follow all guidance provided in the FOA.

All NIOSH announcements are published in the NIH Guide for Grants and Contracts.

The NIH Guide for Grants and Contracts can be found at:

<http://grants.nih.gov/grants/guide/index.html>

NIOSH also posts all announcements on the OEP Web site at:

<http://www.cdc.gov/niosh/oep/funding.html>

All Federal Agencies are also required to post a synopsis of their announcements on a common Web site. This Web site provides a “one-stop shop” for potential applicants. The synopsis contains a brief description of the program, eligibility information, and a link to the full announcement. This common Web site can be found at:

<http://www.grants.gov/>

NIOSH OEP uses both the grant and cooperative agreement funding mechanisms to provide support. A cooperative agreement is a grant in which Federal personnel maintain significant involvement. (Hereafter in this report both will be referred to as grants.) In addition, there are Activity codes which identify different kinds of grants, and the codes commonly used by NIOSH are given in Table 3. The activity code is specified in the RFA or PA. A potential applicant can discern information about the type of program being funded simply by knowing the definition of the activity code.

Table 3 - NIOSH Activity Codes

K01	Research Scientist Development Award
R01	Research Project Grant
R03	Small Research Grant
R13	Conference Grant
R21	Exploratory/Developmental Grant
R25	Education Project Grant
R43	Small Business Innovation Research (SBIR) Phase I
R44	Small Business Innovation Research (SBIR) Phase II
T01	Training Project Grants-Graduate
T02	Training Project Grants-Undergraduate
T42	Education and Research Centers
U01	Research Project Cooperative Agreement
U19	Research Program Cooperative Agreement
U50	Special Cooperative Investigations/Assessment of Control and Prevention Methods
U54	Specialized Center-Cooperative Agreements
U60	Cooperative Agreements in Occupational Safety and Health Research, Demonstrations, Evaluation and Education

Table 4 includes information on each of the NIOSH RFAs and PAs published and/or open for applications in FY 2005.

Table 4 - 2005 NIOSH RFAs and Pas

RFA/PA Number	Announcement Title	Activity Code	Appl Deadline
RFAs			
OH- 05-005	Mining Occupational Safety and Health Research	R01	3/15/2005
OH- 05-003	Occupational Exposure Risk on Reproduction/Development	R01	1/13/2005
EPA STAR-2005-B1	Nanotechnology Research Grants Investigating Environmental and Human Health Effects of Manufactured Nanomaterials: A Joint Research Solicitation--EPA, NSF, NIOSH	R01/R21	1/5/2005
ES-04-007	Environmental Justice: Partnerships for Communication (co-funded with NIH)	R25	1/8/2005
OH- 05-006	Centers for Excellence to Promote a Healthier Workforce	U19	9/14/2005
OH- 05-004	Interaction of Risk Factors for Musculoskeletal Disorders	U01	1/14/2005
PAs			
PAR 05-107	Education and Research Centers	T42	9/16/2005
PA-04-021	Small Grants in Occupational Safety and Health Research	R03	Standard-ongoing until 11/23/2006
PA-04-030	NIOSH Exploratory/Developmental Grant Program	R21	Standard-ongoing until 10/2006
PA-04-038	Occupational Safety and Health Research	R01	Standard-ongoing until 11/23/2006
PAR-04-105	Career Development Grants in Occupational Safety and Health Research	K01	Standard-ongoing until 7/2/2006
PAR-04-106	State-Based Occupational Safety and Health Surveillance	U60	August 6 each year until 2007
PAR-05-005	NIOSH Support for Conferences and Scientific Meetings	R13/U13	12/16/2007
Omnibus 2004-2	Small Business Innovation Research	R43/R44	1/4/2006

Table 5 provides a listing of the announcements for FY 2006.

Table 5 - 2006 NIOSH RFAs and Pas

RFA/PA Number	Announcement Title	Activity Code	Appl Deadline
RFAs			
EPA-STAR F1-F7	Nanotechnology Research Grants Investigating Environmental and Human Health Effects of Manufactured Nanomaterials: A Joint Research Solicitation-EPA, NSF, NIOSH, NIEHS		2/22/2006
RFA-OH-06-002	Prevention of Airborne Infections in Occupational Settings	R01	4/16/2006
RFA-OH-06-004	Workplace Violence Prevention Research	R01	4/19/2006

RFA-OH-06-005	National Mesothelioma Virtual Registry and Tissue Bank	U19	4/25/2006
PAs			
PA-04-021	Small Grants in Occupational Safety and Health Research	R03	11/23/2006
PA-04-030	NIOSH Exploratory/Developmental Grant Program	R21	10/2006
PA-04-038	Occupational Safety and Health Research	R01	11/23/2006
PA-05-015	Research Supplements to Promote Diversity in Health-Related Research		9/30/2007
PA-05-081	Research on Emergency Medical Services for Children	R01	7/2/2008
PAR-04-105	Career Development Grants in Occupational Safety and Health Research	K01	7/2/2006
PAR-05-026	Community Participation in Research--OBSSR, NCI, NHLBI, NICHD, NIDCR, NIEHS, NINR, NIAAA, NIMH, NIDCD, AHRQ, NIOSH	R01/R21	5/18/2007
PAR-04-106	State-Based Occupational Safety and Health Surveillance	U60	August 6 each year until 2007
PAR 06-014	NIOSH Support for Conferences and Scientific Meetings	R13/U13	12/16/2007
PAR 05-126	Training Project Grants, Undergraduate and Graduate Training	T01/T02	8/24/2005
Omnibus Solicitation PHS 2006-02	Small Business Innovation Research	R43/R44	1/4/2006
PAR 06-057	Centers for Agricultural Disease and Injury Research, Education, and Prevention	U50	2/16/2008
PAR-06-485	OS&H Education and Research Centers	T42	9/13/2006
PAR-06-484	OS&H Training Project Grants	T01, T02, T03, T15	8/24/2006

Application Receipt, Referral, and Two-Step Peer Review

Receipt and Referral

NIOSH utilizes the Center for Scientific Review (CSR) at the National Institutes of Health (NIH) as the receipt point for all grant applications. CSR refers the applications to NIOSH based on standard referral guidelines and the RFA/PA specified on the application.

Initial Review for Scientific Merit

The initial review is administered by a NIOSH Scientific Review Administrator (SRA). In the initial review, applications are evaluated by a peer review panel made up of academic and other extramural scientists with appropriate expertise. The applications are ranked using a priority score scheme, and summary statements containing the application's strengths and weaknesses are sent to the applicants.

Secondary Programmatic Review

OEP Scientific Program Administrators (SPAs) utilize the results of the initial review to compile a programmatic review package. The SPAs present the review package to the NIOSH Secondary Review Committee which is composed of

senior NIOSH scientists (Division, Office, and Laboratory Directors). The committee advises the Director of NIOSH on matters relating to the conduct and support of research, training, health information dissemination, and other programs with respect to factors that affect occupational safety and health.

Electronic Submission

The National Institutes of Health will soon *require* all competing research grant applications to come in *electronically* via the web portal of Grants.gov on a new SF 424 Research and Related (R&R) application. A transition period began on Dec. 1, 2005 with the submission for small business (SBIR/STTR) applications, and it will be completed in September 2007 when all grant programs will be submitted electronically on the new form.

Once a grant mechanism “goes electronic” on the transition submission date, all applications (new, revised, competing) must utilize the SF424(R&R) form and be submitted electronically through Grants.gov. Paper applications will not be accepted after the transition date for a grant mechanism. In preparing for electronic submission, applicants are required to complete registration processes in the eRA Commons and Grants.gov prior to submission. For more information on electronic submission, go to website <http://grants.nih.gov/grants/oer.htm>.

Award

After both review steps are complete, funding recommendations are presented to the Director of NIOSH for approval. When the Director approves an application for funding, the OEP staff works with Grants Management staff to make the award.

Success Rate

The success rate is the percentage of reviewed applications that receive funding on a fiscal year basis. It pertains only to those grant mechanism activity codes used in funding research, including R01, R03, R21, U19, and U01. Funding mechanism activity codes used in the funding of other public health activities such as surveillance, communication, and training are not included in the success rate.

The success rate is one of the measures of the viability of the research grants program. Ideally, the success rate should remain fairly stable over several years and should be comparable to rates from other similar funding sponsors. However, as shown in the chart below, the NIOSH success rate has varied significantly over the last ten years and has usually been well below the rate of 30% that is typical of the National Institutes of Health (NIH). In the past five years, the NIOSH success rate has dropped from 31% to 15%. The trend of success rates from 1996 to 2005 is highly variable and consistently lower than success rates reported by NIH. While a lower success rate tends to discourage potential applicants, it also means that there is large need for funding to support occupational safety and health research..

One significant impact of the low success rate is on the National Occupational Research Agenda (NORA). NORA identified 21 areas where researchers, employees and employers all agreed that research should be focused in order to

address the needs of workers in the United States. Although some strides have been made, the ability of the occupational safety and health research community to address these areas is seriously constrained by the limited numbers of awards, averaging fewer than two new competing awards per NORA area in FY2005. Although each funded project makes an important contribution to filling knowledge gaps, the number of gaps far exceeds the available resources. Thus, these data highlight the limited ability of NIOSH to support NORA, which was developed to improve safety and health at work for all people.

The success rate is significant to investigators because it is an indicator of the likelihood of funding, which impacts their ability to remain employed to conduct research on occupational safety and health needs. A success rate that is too low will discourage prospective investigators from applying to a NIOSH-sponsored announcement. A low success rate over several years can cause an erosion of the intellectual base that is critically needed to address important occupational safety and health issues.

There are many factors that affect the success rate, thus causing fluctuation from year to year. These factors include:

- Funding availability
- Size of individual awards
- RFAs published that year by NIOSH
- RFAs published that year by other institutes and centers
- Quality of applications

The following chart displays historical data on NIOSH Success Rates:

NIOSH Grant Funding Success 1996-2005

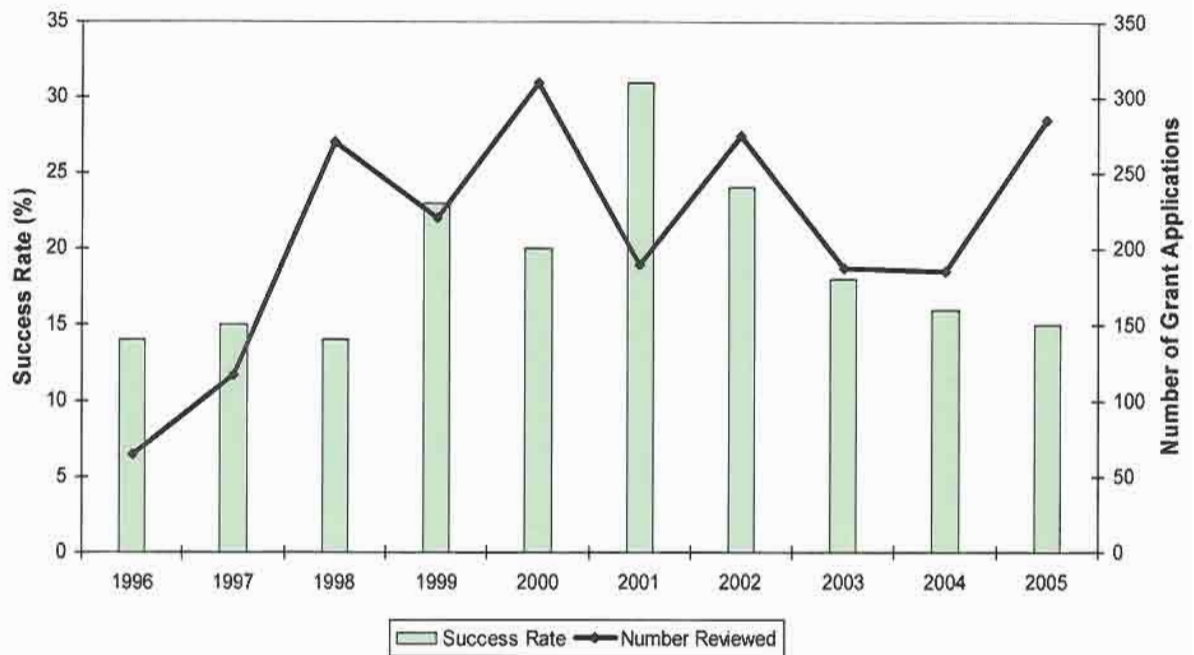


Table 6 displays details on the FY 2005 success rate.

Table 6 – 2005 Success Rates				
Activity Code	Number of Appls	Number of Awards		Success Rate
R01	173	28		16%
R03	48	7		15%
R21	40	2		5%
R25	8	5		6%
U01	16	2		13%
Totals-Overall Success Rate:		285	44	15%

In FY2006 and beyond, NIOSH will focus resources, re-examine research priorities, and adjust the size of awards with a goal of increasing our R01 success rate to at least 20%. Through these measures, NIOSH hopes to sustain the necessary research base for improving the health and safety of the United States workers.

Post Award Program Monitoring and Closeout

Program Monitoring

On an ongoing basis, OEP SPAs review the progress of the extramural grant projects.

Closeout

NIOSH is emphasizing impact in both our intramural and extramural research programs. Grantees are being asked to provide information in their final reports on the impact of their project. It is vital to answer the question, "What difference has this project made for worker health and safety?"

Selected Grant Summary Reports

As mentioned above, NIOSH grantees submit annual and final progress reports for all grants. Based on the information provided in these progress reports, we are pleased to share the following examples of findings from a six grants that were completed in FY 2005. The projects represented in this section illustrate the types of extramural projects funded by NIOSH.



Respiratory Protection Against Bioaerosol to Agriculture

Grant# 5 R01 OH004085-03

Principal Investigator: Tiina Reponen, Ph.D.

Institution: University of Cincinnati

Respirators, when properly selected and used, can decrease the exposures in agricultural environments. In this study, a new field compatible method was developed to dynamically measure the protection provided by respirators against dust and microorganisms in agricultural environments. Dr. Reponen used filter sampling to determine the protection provided by respirators against biological particles (fungal and actinomycete spores and bacteria). Evaluation included in-laboratory testing under controlled conditions and in the field during different operations. Extensive laboratory evaluation confirmed that the sampling system can detect changes in the protection factors caused by variation in face seal leaks, human activity, and breathing pattern in both manikin-based and human tests. It was found that the sampling flow was least affected by the inhalation flow when the sampling probe was imbedded on the respirator surface. The results of this study provide useful pilot data to establish guidelines for respiratory protection against airborne dust and microorganisms on agricultural farms. The method is a promising tool for further epidemiological and intervention studies in agricultural and other occupational and non-occupational environments contaminated with airborne dust and bioaerosols.



Grant# 5 R01 OH004201-03
Field Studies – Innovative Safe Excavation Technologies
Principal Investigator: Leonhard Bernold, Ph.D.
Institution: North Carolina State University Raleigh

Workers lives can be saved and productivity can be increased according to the research from this study on excavation technologies. Dr. Bernold focused on two specific workplace hazards: pipe installation and cave-ins at underground utilities. Diverse support systems such as shoring, shielding, and sloping are applied during trench excavating and pipe laying operations, yet accidents still occur. Dr. Bernold proposes as a remedy to remove the need for people to enter the confined space through the use of a tele-robot. Two separate mechanisms were designed due to the complexities in installing pipes of various types. Both were designed as an attachment to backhoe excavators or cranes. These devices are labeled PipeMan and PipeMan Jr.



**Trucking Firm Characteristics, Driver
Injury and Outcome**
Grant # 5 R03 OH003804-03
Principal Investigator:
Arthur Oleinick, M.D., J.D.
Institution:
University of Michigan at Ann Arbor

Analysis of the Bureau of Labor Statistics 1993-2001 data resulted in a finding that truck drivers had the highest number of lost time injuries. Lost time includes injuries and illnesses away from work. Truck drivers have occupational risks attributable to driving large vehicles and road accidents. They also have risks of traumatic and repetitive motion injuries from materials handling which can result in back injuries. Dr. Oleinick proposed that little is known about whether truck drivers are at a higher risk for injuries at other sites or during the days away from work produced by the injuries. However, his work documents that a statewide administrative database of work injuries can be converted to a rich source of analytic files. These analytic files are relatively inexpensive, and results can be easily referenced to the medical literature because they rely on standard medical terminology. Study results can serve as input to ergonomic evaluations of high risk occupation/injury combinations and aid in the design of work environments, in particular truck cab design. Information on the medical care costs and, ultimately, days-away-from-work costs for specific diagnoses or related diagnoses will prove critical in designing and choosing primary and tertiary prevention activities.



**Complex Mixture Modeling
Organophosphate Pesticides
Grant # 5 R01 003629-03
Principal Investigator: Charles
Timchalk, Ph.D.
Institution: Batelle Pacific Northwest
Labs**

Organophosphorus pesticides are widely utilized and are neurotoxic. Biomonitoring studies have documented both occupational and non-occupational exposures in adults and children to multiple pesticides. Occupationally exposed agricultural workers handle concentrated pesticide formulations and therefore have higher exposures. Mixtures of pesticides modify absorption rates, extent of metabolism, tissue distribution, clearance and pharmacologic actions. Mixtures can alter dosimetry and biological responses of exposed workers. Physiologically based pharmacokinetic and pharmacodynamic (PBPK/PD) models have been developed and validated. A major objective was to develop an approach to address the impact of mixed exposures on agricultural chemical dosimetry and dynamic response. Secondly, the models that were developed under this project represent a new approach for quantitative exposure and risk assessment. Finally, as demonstrated in this project, it is also possible to use the models to quantitate risk to special populations (i.e. farm workers, children of farm workers; sub-populations with metabolic genetic polymorphisms).



**Effectiveness of Farm Safety Day
Camps for Children**

Grant # 5 R01 OH007536-03

Principal Investigator:

Debra McCallum, Ph.D.

Institution:

University of Alabama in Tuscaloosa

Agriculture is an industry unique in that there is a the high level of participation of children and adolescents. Children and youth are exposed to agricultural hazards in their work and play activities, as well as in observational roles during adult work. The children and youth in hundreds of communities are offered farm safety day camps. These camps teach children to use safe methods of play and age-appropriate work on farms and ranches. The camps are generally a one-day community-wide event or one-day programs conducted through schools. Lessons include a variety of rural and agricultural safety issues. One of the largest programs offering several hundred camps throughout the nation is organized by the Progressive Agriculture Program. Dr. McCallum's grant conducted an evaluation of this program, the Progressive Farmer Farm Safety Day Camp Program.

Results analyzed to this point show a significant increase in knowledge and safe behaviors for the camp participants on the three-month and one-year follow-up interviews in comparison to the pre-test responses. An analysis of knowledge scores for each age group in the sample shows that the effect is similar regardless of age. Furthermore, three months after the camp, half the parents report there has been some safety-related change in their child's behavior. It appears that camp participation does have an effect on safety awareness and behavior in children. However, additional data from non-campers are needed to complete this study, and replications of this study are necessary, before determining with greater certainty how much impact this one-time educational intervention has. The data also indicate that the indirect benefits of a farm safety camp in a community include enhanced safety awareness of the wider community as children and adult volunteers disseminate the information they learned, as well as enhanced community strength and cohesiveness resulting from the cooperation of many individuals and organizations in achieving a common goal.



**Sensor: Utah: State-Based
Surveillance of Work-Related Burns
Grant # 5 U60 008337-01
Principal Investigator: Wayne Ball,
Ph.D.
Institution: Utah Department of
Health**

Utah developed a complete registry of work-related burn cases in Utah, developed and implemented intervention activities, helped insure that affected workers are identified and receive the appropriate medical and environmental follow-up, and receive the appropriate medical and environmental follow-up, and appropriate prevention activities.

The food service industry (SIC 5812) accounted for the highest rate of work-related burns. This industry is one of the largest employers in the state. The majority of cases were related to contact with hot food or beverages, or contact with the equipment used to cook food and/or beverages.

Case follow-up, education, and intervention methods aimed at short-term and long-term prevention of work-related burns were conducted. Analysis of burn data suggests that there is a need for a focused work-related burn prevention program. The rate increased over the years from 1998 through 2004. From the data collected during the years 1998 through 2004, certain high-risk industries have emerged as prime candidates for targeted intervention activities.



Funded Projects in FY 2005

Table 7 displays the grants funded by NIOSH in the Emphasis Areas that are described in an earlier section of this report

Table 8 includes the above grants plus all other grants funded in FY 2005, grouped by NORA priority area. Grants that do not fall within any NORA area are listed separately as "Other Occupational Safety and Health."

Many projects are multi-dimensional. For example, a project that is categorized as control technology could also be focused on the mining industry; thus, making it appropriate to list it in multiple areas.

Descriptions of all projects can be found on the Computer Retrieval of Information on Scientific Projects (CRISP) web site by entering the grant number in the search field. The address for the CRISP Web site is as follows:

<http://www.crisp.cit.nih.gov/>

Table 7 – All FY 2005 Grants Grouped by Program Area

Program Area: Grant Number	Investigator	Institution	Project Title	Project Start	Project End
Agriculture					
5U01OH008104-03	Anger	Oregon Health & Science University	Effectiveness of Computer-based Safety Training In Vineyards	9/30/2003	9/29/2007
5U50OH008108-03	Bean	Ohio State University	Ohio Regional Center for Agricultural Disease and Injury	9/30/2003	9/29/2006
5U01OH008100-03	Chapman	University of Wisconsin-Madison	Midwest Nursery Grower Intervention	9/30/2003	9/29/2007
5U01OH008110-03	Donham	University of Iowa	Certified Safe Farm Evaluating Health Insurance Claims	9/1/2003	8/31/2007
5R25OH008143-03	Keifer	University of Washington	Community Health Intervention with Yakima Agricultural Community	9/1/2003	8/31/2007
5R25OH008144-03	May	Mary Imogene Bassett Hospital	Community Collaboration for Farmworker Health and Safety	9/1/2003	8/31/2007
5R01OH008153-02	May	Mary Imogene Bassett Hospital	Evaluation of an Ergonomically Improved Apple Bag	9/1/2004	8/31/2007
1R03OH008358-01	McCullagh	North Dakota State University	Factors Influencing Farmer's Use of Hearing Protectors	8/1/2005	7/31/2007
5U01OH008091-03	Miles	University of California-Davis	Ergonomic Partnership to Address Treefruit Worker Injury	9/30/2003	9/29/2007
5R25OH008335-02	Quandt	Wake Forest University	JUSTA: Justice and Health for Poultry Workers	9/1/2004	8/31/2008
1K01OH008300-01A	Rautainen	The University of Iowa	Intervention Effectiveness in Finnish Agriculture	8/1/2005	7/31/2008
5R01OH004157-05	Reed	University of Kentucky	Sustained Work Indicators of Older Farmers	9/30/2001	9/29/2006
5R01OH007841-04	Reynolds	Colorado State University	New Methods for Eval of Organic Dust Aerosols - Colorado	8/1/2002	7/31/2007
5U50OH008085-03	Reynolds	Colorado State University	High Plains Intermountain Center for Agriculture Health & Safety	9/15/2003	9/14/2006
1R25OH008542-01	Reynolds	Colorado State University	National Agricultural Tractor Safety Initiative	9/1/2005	8/31/2007
5R25OH008334-02	Shadbeh	Oregon Law Center	Promoting Occupational Health Among Indigenous Farmworkers in Oregon	8/1/2004	7/31/2008
5R01OH007850-03	Fathallah	University of California-Davis	Evaluation of the NAGCAT Tractor Guidelines	8/1/2003	7/31/2006
5U50OH008107-03	Lee	Marshfield Clinic	National Childrens Center for Rural & Agricultural Health & Safety	9/30/2003	9/29/2008
5R01OH008046-03	Marlenga	Marshfield Clinic	Removing the HOOA Family Farm Exemption: Impact On Injury	9/30/2003	9/29/2006
5R01OH008057-04	McCauley	Oregon Health & Science University	Biomarkers of Pesticide Toxicity Among Teen Farmworkers	9/30/2003	9/29/2006

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Program Area: Grant Number	Investigator	Institution	Project Title	Project Start	Project End
5R03OH008000-02A	Milz	Medical College of Ohio at Toledo	Farm Family Total Noise Exposure Assessment	4/1/2004	3/31/2007
5R01OH008058-03	Schwab	Iowa State University of Science & Tech	Evaluation of Occupational Carrying Tasks for Farm Youth	9/1/2003	8/31/2006
5R01OH008070-03	Wilkins	Ohio State University	Adherence to the NAGCAT and Injury Risk Reduction	9/30/2003	9/29/2006
5U50OH007544-05	Fenske	University of Washington	Pacific Northwest Agricultural Safety and Health Center	9/30/2001	9/29/2006
5U50OH007541-05	Levin	University of Texas Health Center at Tyler	Southwest Center for Agricultural Safety and Health	9/30/2001	9/29/2006
5U50OH007542-05	May	Mary Imogene Bassett Hospital	The Northeast Center of Agricultural Safety and Health	9/30/2001	9/29/2006
5U50OH007547-05	McKnight	University of Kentucky	Southeast Center for Agricultural Health and Injury Prevention	9/30/2001	9/29/2006
5U50OH007551-05	Sabella	East Carolina University	A Southeastern Regional Center for Agromedicine	9/30/2001	9/29/2006
5U50OH007548-05	Sanderson	University of Iowa	Great Plains Center for Agricultural Health	9/30/2001	9/29/2006
5U50OH007550-05	Schenker	University of California Davis	Agricultural Health and Safety Center of UC Davis	9/30/2001	9/29/2006
Construction					
IR01OH008554-01	Abraham	Purdue University	Safety of Nighttime Construction Activities	2/1/2005	3/15/2010
5U19OH008308-02	Kleiner	Virginia Polytechnic Institute & State University	Program Project to Support Construction Safety and Health	9/15/2004	6/30/2009
IR01OH008078-01A	Seixas	University of Washington	Training and Reinforcement on Hearing Protection Device Use	4/30/2005	4/29/2009
5U54OH008307-02	Stafford	The Center to Protect Workers' Rights, Inc.	Centers for Construction Safety and Health	9/1/2004	6/30/2009
Education and Training					
Education and Research Centers (ERC)					
IT42OH008428-01	Agnew	John Hopkins University	Education and Research Center (ERC)	7/1/2005	6/30/2007
IT42OH008438-01	Brooks	University of South Florida	Educational Resource Center Training Grants	7/1/2005	6/30/2007
IT42OH008416-01	Christiani	Harvard School of Public Health	Occupational Safety and Health Education and Research Center	7/1/2005	6/30/2008

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Program Area: Grant Number	Investigator	Institution	Project Title	Project Start	Project End
IT42OH008432-01	Clark	University of Cincinnati	Education and Research Center	7/1/2005	6/30/2010
IT42OH008672-01	Conroy	University of Illinois at Chicago	Grants for Education Programs in OS&H, ERC	7/1/2005	6/30/2008
IT42OH008421-01	Delclos	Univ of Texas Health Science Center at Houston	Southwest Center for Occupational and Environmental Health	7/1/2005	6/30/2010
IT42OH008434-01	Greaves	University of Minnesota	Occupational Safety & Health Education & Resource Ctr	7/1/2005	6/30/2007
IT42OH008414-01	Hegmann	University of Utah	Utah ERC	7/1/2005	6/30/2007
IT42OH008412-01	Hinds	University of California Los Angeles	Southern California Education and Research Center	7/1/2005	6/30/2009
IT42OH008422-01	Moline	Mount Sinai School of Medicine	NIOSH (Region II) Educational Resource Center: OS&H Professionals	7/1/2005	6/30/2010
IT42OH008436-01	Oestenstad	University of Alabama at Birmingham	Deep South ERC	7/1/2005	6/30/2007
IT42OH008455-01	Robins	The University of Michigan	The University of Michigan Education & Research Center	7/1/2005	6/30/2010
IT42OH008673-01	Rogers	University of North Carolina at Chapel Hill	Occupational Research and Health Education Center	7/1/2005	6/30/2006
IT42OH008433-01	Seixas	University of Washington	Education and Research Center	7/1/2005	6/30/2010
IT42OH008429-01	Spear	University of California	OS & H Training Grant - Northern CA ERC	7/1/2005	6/30/2007
IT42OH008491-01	Sprince	The University of Iowa	Occupational Safety and Health Training Grant	7/1/2005	6/30/2008
Training Project Grant (TPG)					
IT02OH008622-01	Anna	Millersville University	Training Grants	7/1/2005	6/30/2009
IT01OH008618-01	Behm	East Carolina University	East Carolina University Occupational Safety and Health Consortium	7/1/2005	6/30/2006
IT01OH008605-01	Biscesi	Medical College of Ohio	NIOSH Training Project Grant (TPG) - Industrial Hygiene	7/1/2005	6/30/2009
IT02OH008623-01	Boepple	Trinidad State Junior College	Occupational Safety Training via Distance Learning	7/1/2005	6/30/2007
IT02OH008606-01	Carter Sr.	North Carolina A & T State University	Campus and Distance Learning Enhancement in OSH	7/1/2005	6/30/2007

Table 7 – All FY 2005 Grants Grouped by Program Area

Program Area: Grant Number	Investigator	Institution	Project Title	Project Start	Project End
IT01OH008607-01	Cullen	Yale University	Occupational Safety and Health Training Grant	7/1/2005	6/30/2006
IT01OH8608-01	Darcey	Duke University Medical Center	Occupational Safety and Health Training	7/1/2005	6/30/2006
IT15OH008631-01	Dzagan	Alaska Marine Safety Education Assn (AMSEA)	Continuing Education Grant - F/V Safety	7/1/2005	6/30/2006
IT01OH008424-01	Ellenbecker	University of Massachusetts Lowell	Occupational Health and Safety Training Grant	7/1/2005	6/30/2010
IT01OH008628-01	Emmett	University of Pennsylvania	Occupational Safety and Health Training Grant	7/1/2005	6/30/2008
IT01OH008620-01	Feigley	University of South Carolina	Graduate Education in Occupational Epidemiology	7/1/2005	6/30/2009
IT02OH008624-01	Figueroa	University of North Alabama	Occupational Safety and Health Training Grant	7/1/2005	6/30/2009
IT01OH008404-01	Fonooni	University of Minnesota Duluth	Grants for Education in Occupational Safety and Health	7/1/2005	6/30/2010
IT01OH008407-01	Funk II	Oregon State University	Occupational Safety and Health Training Program	7/1/2005	6/30/2006
IT02OH008625-01	George	Western Kentucky University	Industrial Hygiene Curriculum at Western Kentucky Univ	7/1/2005	6/30/2006
IT01OH008619-01	Gonzalez	University of Puerto Rico	Education Programs in Occupational Safety and Health	7/1/2005	6/30/2008
IT01OH008629-01	Grimsley	Tulane University	Grants for Education Programs in OS&H - #03001	7/1/2005	6/30/2006
IT01OH008439-01	Guffey	West Virginia University	Training Grant for Industrial Hygiene	7/1/2005	6/30/2010
IT01OH008435-01	Hammer	Portland State University	Graduate Training in Occupational Health Psychology	7/1/2005	6/30/2010
IT01OH008610-01	Henning	University of Connecticut	Work Organization and Health Psychology	7/1/2005	6/30/2006
IT01OH008630-01	Jensen	Montana Tech	Combined Undergraduate and Graduate Training Program	7/1/2005	6/30/2008
IT01OH008611-01	Khalil	University of Miami	Occupational Safety and Health Training Grant	7/1/2005	6/30/2009
IT01OH008437-01	Kraemer	Murray State University	Occupational Safety and Health Program Improvement	7/1/2005	6/30/2010

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Program Area: Grant Number	Investigator	Institution	Project Title	Project Start	Project End
IT01OH008431-01	Martin	West Virginia University	Appalachian Training Program in Occupational Health and Safety	7/1/2005	6/30/2010
IT01OH008417-01	McCauley	University of Pennsylvania	Masters Education in Occupational Environmental Health	7/1/2005	6/30/2007
IT01OH008612-01	Meyer	University of Connecticut	Occupational and Environmental Medicine Residency Training (TPG)	7/1/2005	6/30/2009
IT01OH008409-01	Mueller	University of Colorado Health Sciences Center	Occupational Medicine Residency Training Support	7/1/2005	6/30/2010
IT01OH008613-01	Nussbaum	Virginia Tech	Occupational Safety and Health Training Grant	7/1/2005	6/30/2006
IT01OH008614-01	Phillips	University of Oklahoma	Industrial Hygiene Training Grant	7/1/2005	6/30/2009
IT01OH008410-01	Reynolds	Colorado State University	Industrial Hygiene Training Program	7/1/2005	6/30/2010
IT01OH008615-01	Rosenthal	Purdue University	Occupational Safety and Health Training Grant	7/1/2005	6/30/2006
IT02OH008626-01	Ryan	Central Maine Community College	Undergraduate Training Progs CMCC awards AAS & Certification in OHS	7/1/2005	6/30/2007
IT01OH008430-01	Samimi	San Diego State University	NIOSH Graduate Training in Occupational Safety and Health	7/1/2005	6/30/2010
IT01OH008616-01	Schwertha	University of Pittsburgh	Graduate Training Programs	7/1/2005	6/30/2006
IT01OH008617-01	Smith	Texas Tech University	Occupational Ergonomics	7/1/2005	6/30/2009
IT01OH008402-01	Sorrell	University of Wisconsin-Stout	'Curricular Enhancement in Safety/Risk Control	7/1/2005	6/30/2010
IT01OH008609-01	Tolbert	Rollins School of Public Health	Graduate Training Program	7/1/2005	6/30/2007
IT02OH008627-01	Worchel	University of Hawaii at Hilo	Occupational Safety and Health: A Behavioral Approach	7/1/2005	6/30/2006
IT01OH008408-01	Zey	Central Missouri State University	TPG CMSU Industrial Hygiene Master Program	7/1/2005	6/30/2008
Mining IK01OH008182-01A	Armendariz	Southern Methodist University	Control of Workplace Diesel Exhaust Particulate	8/1/2005	7/31/2008

Table 7 – All FY 2005 Grants Grouped by Program Area

Program Area: Grant Number	Investigator	Institution	Project Title	Project Start	Project End
5R01OH007680-04	Baum	Oak Crest Institute of ScienceE	Real-time In Situ Aerosol Monitoring In Mine Atmospheres	9/1/2002	8/31/2007
IR43OH008571-01	Frederick	Mining Innovations LLC	Personal Emergency Stop (PE-Stop) for Mining	9/1/2005	8/31/2006
5R25OH008319-02	Grayson	University of Missouri-Rolla	Western U.S. Mining Safety and Health Training and Translation Center	9/1/2004	8/31/2009
IR01OH008723-01	Guffey	West Virginia University	Real Time Hearing Protector Insertion Loss Study	9/1/2005	8/31/2008
5R01OH007727-04	Hill	Utd, Inc.	Improved Health and Safety In Mining Through Helical Drilling & Rock Bolt Anchoring	9/30/2002	9/29/2006
IR01OH008716-01	Karnis	Virginia Polytechnic Institute and State University	Virtual Environment (VE) Applications to Improve Mining Health and Safety Training	8/1/2005	7/31/2008
IR01OH008676-01	Kittelson	University of Minnesota	A New Method for Real-Time Measurement of Diesel Aerosols	8/1/2005	7/31/2008
IR01OH008709-01	Kuchta	Colorado School of Mines	Waterjet Scaling for Reducing Scaling Injuries Underground Mining	8/1/2005	7/31/2008
Small Business Innovation Research					
IR43OH008561-01	Cheyne	Sensimetrix Corporation	Developing a Low-Cost Miniature Personal Noise Dosimeter	9/1/2005	2/28/2006
5R44OH007465-03	Fauli	Eltron Research, Inc	Real-time Personal Monitor for the Drycleaning Industry	9/1/2001	8/31/2006
IR43OH008497-01	Majumdar	Compact Membrane Systems, Inc.	Enhanced Management of Ethylene Oxide Sterilizers	8/15/2005	8/15/2006
5R44OH007673-03A	Masterman	Robert C. Byrd Technology Center	Bioelectric Telemetry System for Fire Fighter Safety	9/1/2004	8/31/2006
IR43OH008192-1A1	Sabelman	Promanis Software Inc.	Work Injury Risk Reduction Tool for Detection of MSDs	8/1/2005	1/31/2006
5R44OH004173-03A	Wiesmann	Biostar, Inc.	SCBA Oximetry for Fire Fighter Physiologic Monitoring	9/30/2000	8/31/2006
Surveillance					
IR13OH008565-01	Sewell	Council of State and Territorial Epidemiologists	State-Based Occupational Health Surveillance	8/1/2005	7/31/2010
IR25OH008593-01	Kirkland	Association of Occupational and Environmental Clinics	Research in Training and Education in OHS	9/1/2005	9/30/2008
IU60OH008463-01	St. Louis	Connecticut Department of Public Health,	Connecticut Occupational Health Surveillance	7/1/2005	6/30/2008

Table 7 – All FY 2005 Grants Grouped by Program Area

Program Area: Grant Number	Investigator	Institution	Project Title	Project Start	Project End
IU600H008466-01	Rosenman	Division of Environmental Health Michigan State University	Enhanced Program in Occupational Injury and Illness Surveillance	7/1/2005	6/30/2010
IU600H008468-01	Harrison	California Department of Health Services	California Occupational Safety and Health Surveillance	7/1/2005	6/30/2010
IU600H008470-01	Dugas	Louisiana State Department of Public Health	Occupational Health and Injury Surveillance in Louisiana	7/1/2005	6/30/2008
IU600H008472-01	Heumann	Oregon State Department of Human Services	Oregon Worker Illness and Injury Prevention Program	7/1/2005	6/30/2010
IU600H008474-01	Gelberg	New York State Department of Health	Occupational Safety and Health Surveillance in New York	7/1/2005	6/30/2006
IU600H008475-01	Archer	Oklahoma State Dept of Health	Oklahoma Occupational Safety and Health Surveillance	7/1/2005	6/30/2008
IU600H008483-01	Auslander	Kentucky State Department for Health Services	Kentucky Occupational Safety and Health Surveillance	7/1/2005	6/30/2008
IU600H008484-01	Anderson	WI Bureau of Environmental and Occupational Health	Wisconsin Occupational Safety and Health Surveillance Program	7/1/2005	6/30/2008
IU600H008485-01	Valiante	New Jersey Department of Health and Senior Services	New Jersey Fundamental and Expanded Occupational Health Surveillance	7/1/2005	6/30/2010
IU600H008486-01	Mulloy	University of New Mexico Health Sciences Center	New Mexico Occupational Health Surveillance	7/1/2005	6/30/2008
IU600H008487-01	Bonauto	Washington State Department of Labor and Industries	Washington Occupational Surveillance Program	7/1/2005	6/30/2010
IU600H008490-01	Davis	Massachusetts Department of Public Health	Expanded Occupational Health Surveillance in MA	7/1/2005	6/30/2010
2R01OH003915-04	Fleming	University of Miami School of Medicine	Surveillance of Mortality and Morbidity in US Workers	12/1/1999	8/31/2007
5R01OH007830-03	Dischinger	University of Maryland-Baltimore	A Comprehensive Surveillance of Occ Injury In Maryland	7/10/2003	7/9/2006
5U600H008324-02	Heumann	Oregon State University	Oregon Face Project	9/1/2002	8/31/2006
5U600H008325-02	Hetzler	Nebraska Workforce Development, Department of Labor	(FACE) Nebraska	9/1/2002	8/31/2006
5U600H008326-02	Harrison	California Department of Health Services	(FACE) California	9/1/2001	8/31/2006
5U600H008328-02	Islam	Department of Health and Family Services	(FACE) Wisconsin	9/1/2001	8/31/2006
5U600H008329-02	Peck	Michigan Department of Labor and Economic Growth	(FACE) Michigan	9/30/2002	9/29/2006

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Program Area: Grant Number	Investigator	Institution	Project Title	Project Start	Project End
5U600H008330-02	Gelberg	New York State Department of Health	(FACE) New York	9/1/2001	8/31/2006
5U600H008331-02	Davis	Massachusetts Dept of Public Health	(FACE) Massachusetts	9/1/2001	8/31/2006
5U600H008336-02	Cohen	Washington State Department of Labor & Industries	(FACE) Washington	9/1/2002	8/31/2006
5U600H008340-02	Hull-Jilly	Alaska Department of Health and Social Services	(FACE) Alaska	9/1/2001	8/31/2006
5U600H008342-02	Archer	Oklahoma State Department of Health	(FACE) Oklahoma	9/30/2002	9/29/2006
5U600H008343-02	Thayer	West Virginia Department of Health & Human Services	(FACE) West Virginia	9/1/2001	8/31/2006
5U600H008344-02	Bender	Minnesota Department of Health	(FACE) Minnesota	9/1/2001	8/31/2006
5U600H008345-02	Bost	New Jersey Department of Health & Senior Services	(FACE) New Jersey	9/1/2001	8/31/2006
5U600H008350-02	Williams	Kentucky Department for Public Health	(FACE) Kentucky	9/1/2002	8/31/2006
5U600H008398-02	Kraemer	Iowa Department of Public Health	(FACE) Iowa	9/1/2001	8/31/2006
5U600H317613-05	Parazino	Association of Occupational and Environmental Clinics	Research, Prevention Education, and Clinical Services In Occupational Safety and	9/30/1999	9/29/2005
World Trade Center					
5U100H008223-02	Harrison	NY University School of Medicine	NYU World Trade Center Responder Health Consortium	8/13/2004	8/12/2009
5U100H008225-02	Herbert	Mount Sinai School of Medicine	WTC Responder Health Consortium Clinical Center	7/15/2004	7/14/2009
5U100H008243-02	Kelly	New York City Fire Department	NYC Fire Dept. Clinical Center for WTC Medicals	7/1/2004	6/30/2009
5U100H008232-02	Levin	Mount Sinai School of Medicine	WTC RHC Data and Coordination Center	6/1/2004	5/31/2009
5U100H008216-02	Luft	Research Foundation of the NY State University	Clinical Services for World Trade Center Responders	7/15/2004	7/14/2009
5U100H008275-02	Markowitz	Research Foundation of CUNY	Queens Ground Zero Workers Health Watch	6/1/2004	5/31/2009
5U100H008242-02	Prezant	New York City Fire Department	NYC Fire Dept. Data Coordinating Ctr for WTC Medicals	7/1/2004	6/30/2009
5U100H008239-02	Udasin	UMDNJ-Robert W. Johnson Medical School	Clinical Center for Monitoring Health in WTC Responders	7/1/2004	6/30/2009

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Allergic and Irritant Dermatitis					
None					
Asthma and Chronic Obstructive Pulmonary Disease					
5R03OH008136-02	Arif	Texas Tech	Occupational Asthmagens in Cleaners: A Focus Group Study	9/1/2004	6/30/2006
5R01OH003457-09	Cullen	Yale University	Longitudinal Study of Isocyanate Asthma In Body Shops	9/30/2002	9/29/2007
1R01OH008391-01	Lemiere	Sacre-Coeur Hospital	Towards a Better Understanding of Work-aggravated Asthma	9/1/2005	8/31/2010
Fertility and Pregnancy Abnormalities					
5K01OH007609	Dardynskaia	University of Illinois at Chicago	Reproductive Outcomes Due to Past Exposure to Dioxins	8/11/2003	8/10/2006
1R01OH008579	Robbins	University of California Los Angeles	Male Reproductive Effects From Exposure to Boron	9/30/2001	9/29/2006
1R01OH008578	Li	Kaiser Foundation Research Institute	Exposure to Bisphenol A & Reproductive Effect in Humans	9/30/2003	9/29/2008
5R01OH007580	Hauser	Harvard School of Public Health	Maternal Phthalate Exposure and Infertility, Fetal Loss	7/1/2005	6/30/2008
1R21OH008543	Flaws	University of Maryland, Baltimore	Reproductive Outcomes in Salon Employees (ROSE)	7/1/2005	6/30/2008
5R01OH007575	Meyer	University of Connecticut Health Center	Longitudinal Measurement of Work Stressors in Pregnancy	8/1/2005	7/31/2007
Hearing Loss					
5R01OH003973-05	Bohne	Washington University	Adverse Effects of Noise on Hearing: Basic Mechanisms	5/1/2001	4/30/2006
1R43OH008561-01	Cheyne	Sensimetries Corporation	Developing a Low-Cost Miniature Personal Noise Dosimeter	9/1/2005	2/28/2006
5R01OH003481-08	Fechter	Lome Linda Veterans Assn/Research Educ	Models for Assessing Risk of Occupational Hearing Loss	9/30/2002	9/29/2006
1R01OH008723-01	Guffey	West Virginia University	Real Time Hearing Protector Insertion Loss Study	9/1/2005	8/31/2008
5R01OH002317-20A	Hamernik	Plattsburgh State University	Hearing Hazard Associated with Industrial Noise Exposure	8/1/2004	7/31/2007
5R01OH007801-02A	Hamernik	Plattsburgh State University	Model for Prediction of Noise-induced Hearing Loss	4/1/2004	3/31/2006
1R01OH008113-01A	Henderson	State University of New York at Buffalo	Prevention of Solvent and Noise-Induced Hearing Loss	5/1/2005	4/30/2009
1R03OH008358-01	McCullagh	North Dakota State University	Factors Influencing Farmer's Use of Hearing Protectors	8/1/2005	7/31/2007
5R03OH008000-02A	Milz	Medical College of Ohio at Toledo	Farm Family Total Noise Exposure Assessment	4/1/2004	3/31/2007
5R03OH008175-02	Qiu	Plattsburgh State University	Neural network model of noise-induced hearing loss	9/1/2004	8/31/2006
2R01OH003912-06	Seixas	University of Washington	Longitudinal Follow-up of Hearing in Construction	9/30/1999	8/31/2010

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Infectious Diseases					
5R01OH008215-02	Gershon	Mailman School of Public Health	Blood Borne Pathogen Risk in Home Healthcare Workers	9/1/2004	6/30/2008
5R01OH008071-02	Johnson	University of North Texas Health Science Center at Fort Worth	Cancer Risk In Workers Exposed to Oncogenic Viruses	5/1/2004	4/30/2007
5R01OH008241-02	Leiss	Constella Group, Inc	Exposure to Blood Among Home Health Care Nurses	9/1/2004	6/30/2007
5R01OH008237-02	Lipscomb	University of Maryland	Blood Exposure and Primary Prevention in the Home Care Workplace	7/1/2004	6/30/2008
5R01OH007489-04	Mittleman	Beth Israel Deaconess Medicine	A Case-crossover Study of Sharps-related Injuries	9/1/2002	8/31/2006
5R01OH008229-02	Quinn	University of Massachusetts - Lowell	Sharps Injuries and Blood Exposure in Homes Health Care	7/1/2004	6/30/2008
Musculoskeletal Disorders: Low Back					
5U01OH008083-03	Garg	University of Wisconsin Milwaukee	Low Back Pain Quantifying Risk Factors	9/30/2003	9/29/2006
5R01OH008007-02	Lipscomb	Duke University	Back Disorders In Union Carpenters	6/1/2004	5/30/2007
5R01OH007787-04	Marras	Ohio State University	Neuro-fuzzy Prediction of Spine Loads In Response to Risk Factors	9/30/2002	9/29/2006
5K01OH007996-03	Pompeii	Duke University	Back Pain & Work Disability In Health Care Workers	9/30/2003	9/29/2006
5R01OH007622-03	Solomonow	Louisiana State Univ HSC New Orleans	Physiology of Cumulative Low Back Disorders	8/1/2003	7/31/2008
Musculoskeletal Disorders: Upper Extremities					
5K01OH007826-02A	Baker	University of Pittsburgh	Developing an Instrument to Measure Keyboarding Style	5/1/2004	4/30/2007
1U01OH008599-01	Barbe	Temple University Commonwealth System of Higher Education	Effect of Repetition in Aged Rats with WMSD	7/1/2005	8/31/2008
2R01OH003997-04A	Dennerlein	Harvard School of Public Health	Tools for Exposure Assessment of Physical Risk Factors in VDT Work	9/1/2005	8/31/2008
5R01OH008017-02	Evansoff	Washington University	Post-offer Screening and Risk Factors for Cts	6/1/2004	5/31/2009
1R01OH008531-01	Flavahan	The Ohio State University Research Foundation	Mechanisms of Vascular Dysfunction in Vibration Injury	8/1/2005	7/31/2010
5U01OH007917-04	Garg	University of Wisconsin-Milwaukee	Upper Limb Musculoskeletal Disorders: Quantifying Risk	9/30/2002	9/29/2006
5R01OH007945-03	Gerr	University of Iowa	Prospective Study of UEMSD and Physical Job Stressors	9/1/2003	8/31/2007
1K01OH008134-01A	Gold	University of Massachusetts-Lowell	Skin Temperature in the Hands of Office Workers	9/1/2005	8/31/2008
5R01OH007786-03	King	University of California, San Francisco	In Vivo Rabbit Model of Finger Musculoskeletal Disorders	9/30/2003	8/31/2007

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5R01OH007914-03	Rempel	University of California	Collaborative Study:workplace Musculoskeletal Disorders	9/1/2003	8/31/2007
5R01OH003493-05A	Riley	Medical College of Wisconsin	Understanding Vibration Injury	9/1/2004	6/30/2009
1R43OH008192-1A1	Sabelman	Promanis Software Inc.	Work Injury Risk Reduction Tool for Detection of MSDs	8/1/2005	1/31/2006
1R21OH008273-01	Sommerich	Ohio State University	Macaque Model for Carpal Tunnel Syndrome Due to Overuse	4/1/2005	3/31/2007
5K01OH007838-03	Zhang	University of Illinois Urbana-Champaign	Shoulder, Low Back, Or Knee Strength Degradation	9/1/2003	8/31/2006
Traumatic Injuries					
5R01OH007816-02A	Gerberich	University of Minnesota	Violence Against Teachers: Etiology & Consequences	5/1/2004	4/30/2007
5R01OH007948-04	Lipscomb	University of Maryland-Baltimore	Evaluation of Workplace Violence Prevention Intervention	9/30/2002	9/29/2007
5R01OH007882-03	Nussbaum	Virginia Polytechnic Institute & State University	Risk Factors and Controls for Falls From Heights	9/1/2003	8/31/2007
1R01OH008174-01A	Perry	Harvard School of Public Health	Risk Factors for Lacerations in Meatpacking	9/1/2005	8/31/2009
1K01OH008300-01A	Rautainen	The University of Iowa	Intervention Effectiveness in Finnish Agriculture	8/1/2005	7/31/2008
Emerging Technologies					
1R01OH008282-01A	Kagan	University of Pittsburgh	Lung Oxidative Stress/Inflammation by Carbon Nanotubes	7/1/2005	6/30/2009
1R01OH008806-01	O'Shaughnessy	The University of Iowa	Assessment Methods for Nanoparticles in the Workplace	7/1/2005	6/30/2008
1R01OH008807-01	Xiong	New York University School of Medicine	Monitoring and Characterizing Airborne Carbon Nanotube Particles	8/1/2005	7/31/2008
Indoor Environment					
1R03OH008244-01	Bitler	RAND	Smoking Bans and Health: Effects of Exposure on the Job	7/1/2005	6/30/2007
5R01OH008117-02	Mendell	University of Calif-Lawrence Berkeley Lab	Indoor Environment and Symptoms in Office Building	4/1/2004	3/31/2007
5R03OH007904-02A	Yang	University of Miami	Personal Displacement Ventilation	8/15/2004	8/14/2006
Mixed Exposures					
2R01OH003669-05A	Baynes	North Carolina State University	Mixture Effects on the Dermal Absorption of Biocides	9/1/2005	8/31/2008
5R01OH007493-02A	Bunge	Colorado School of Mines	Dermal Absorption of Chemicals from Liquid Mixtures	9/1/2004	6/30/2007
5R01OH008149-02	Checkoway	Fred Hutchinson Cancer Research Center	Textile Industry Exposures and Breast Cancer in Women	7/1/2004	6/30/2007
5R01OH008198-02	Fiedler	UMDNJ-Robert W Johnson Medical School	Solvent Exposure: Functional Imaging and Behavior	9/1/2004	8/31/2007
5R03OH008024-02A	Pang	E.O. Lawrence Berkeley National Lab	Exposure Assessment Tools for Multiple Pollutants	9/1/2004	8/31/2006

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2R01OH007555-04A	Riviere	North Carolina State University	Quantitating Absorption of Complex Chemical Mixtures	6/1/2001	3/31/2010
Organization of Work					
5R01OH008496-02	Czeisler	Brigham and Women's Hospital	Sleep Disorders Management, Health and Safety in Police	9/30/2004	9/30/2007
5R01OH003954-06	Eastman	Rush-Presbyterian-St Lukes Medical Ctr	Practical Circadian Interventions for Night Shift Work	9/30/1999	4/30/2008
1U01OH008788-01	Hammer	Portland State University	Development of a Behavioral Measure of Supervisor Support for Work and Family	9/1/2005	8/31/2008
5R01OH007820-03	Krause	University of California-San Francisco	Occupational Physical Activity and Circulatory Diseases	8/1/2003	7/31/2006
1R03OH008351-01	Marshall	Wellesley College	Impact of Work Organization on Womens Postpartum Health	8/1/2005	7/31/2007
1R01OH008171-01A	Schernhammer	Brigham and Women's Hospital	Effects of Light at Night on Circadian System in Nurses	9/1/2005	8/31/2009
5R01OH008141-02	Schieman	University of Maryland, College Park Campus	Origins and Health Impact of Relational Conflict At Work	9/1/2004	8/31/2008
Special Populations					
5U01OH008104-03	Anger	Oregon Health & Science University	Effectiveness of Computer-based Safety Training In Vineyards	9/30/2003	9/29/2007
5R25OH008146-03	Bhatia	San Francisco Dept of Pub Health	Jornaleros Unidos Con El Pueblo (day Laborers United)	9/30/2003	9/29/2007
5R03OH008126-02	Breslin	Institute for Work and Health	Work Injury and Young People: A Prospective Survey	6/1/2004	5/31/2006
5U01OH008100-03	Chapman	University of Wisconsin-Madison	Midwest Nursery Grower Intervention	9/30/2003	9/29/2007
5R01OH007908-02A	Dal Santo	University of North Carolina-Chapel Hill	Effect of Work Permits In Protecting Youth Workers	4/1/2004	3/31/2006
5R01OH007850-03	Fathallah	University of California-Davis	Evaluation of the NAGCAT Tractor Guidelines	8/1/2003	7/31/2006
2R01OH003915-04	Fleming	University of Miami School of Medicine	Surveillance of Mortality and Morbidity in US Workers	12/1/1999	8/31/2007
1R25OH008776-01	Gute	Tufts University	Assessing and Controlling Occupational Health Risks to Immigrants in Somerville	8/1/2005	7/31/2009
1R25OH008775-01	Jayaraman	Restaurant Opportunities Center of New York	New York Restaurant Worker Health and Safety Project	8/1/2005	7/31/2009
5R25OH008143-03	Keifer	University of Washington	Community Health Intervention with Yakima Agricultural Community	9/1/2003	8/31/2007
5R03OH007821-02A	MADIGAN	Virginia Polytechnic Institute & State University	Muscle Strength and Age Effects in Balance Recovery	8/1/2004	7/31/2006
5R01OH008046-03	Marfenga	Marshfield Clinic	Removing the HOOA Family Farm Exemption: Impact On Injury	9/30/2003	9/29/2006
5R25OH008144-03	May	Mary Imogene Bassett Hospital	Community Collaboration for Farmworker Health and Safety	9/1/2003	8/31/2007
5R01OH008057-04	McCauley	Oregon Health & Science University	Biomarkers of Pesticide Toxicity Among Teen	9/30/2003	9/29/2006

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IK01OH008548-01	McCrory	University of Pittsburgh	Farmworkers Biomechanical Stability of Pregnant Women	7/1/2005	6/30/2008
5R25OH008335-02	Quandt	Wake Forest University	JUSTA: Justice and Health for Poultry Workers	9/1/2004	8/31/2008
5R01OH004157-05	Reed	University of Kentucky	Sustained Work Indicators of Older Farmers	9/30/2001	9/29/2006
5K01OH007956-03	Roelofs	University of Massachusetts-Lowell	Nail Salon Hazards and Health Effects	9/1/2003	8/31/2006
5R01OH008058-03	Schwab	Iowa State University of Science & Tech	Evaluation of Occupational Carrying Tasks for Farm Youth	9/1/2003	8/31/2006
5R25OH008334-02	Shadbeh	Oregon Law Center	Promoting Occupational Health Among Indigenous Farmworkers in Oregon	8/1/2004	7/31/2008
5R25OH008378-02	Shen	Asian Communities for Reproductive Justice	Asian Girls for Environmental Health	8/1/2004	7/31/2008
5R01OH008070-03	Wilkins	Ohio State University	Adherence to the NAGCAT and Injury Risk Reduction	9/30/2003	9/29/2006
Cancer Research Methods					
2R01OH004192-04A	Brandt-Rauf	The Trustees of Columbia University in the City of NY	Worker Genetic Susceptibility to Mutagenic Risk	7/1/2001	8/30/2009
5R01OH007871-03	Richardson	University of North Carolina-Chapel Hill	Susceptibility and Occupational Radiation Risks	9/30/2002	9/29/2006
Control Technology					
IK01OH008182-01A	Armendariz	Southern Methodist University	Control of Workplace Diesel Exhaust Particulate	8/1/2005	7/31/2008
IR43OH008571-01	Frederick	Mining Innovations LLC	Personal Emergency Stop (PE-Stop) for Mining	9/1/2005	8/31/2006
IR01OH008119-01A	Harber	University of California-Los Angeles	Respirator Effects in Impaired Workers	7/15/2005	7/14/2010
5R01OH007727-04	Hill	Utd, Inc.	Improved Health and Safety In Mining Through Helical Drilling & Rock Bolt Anchoring	9/30/2002	9/29/2006
IR01OH008709-01	Kuchta	Colorado School of Mines	Waterjet Sealing for Reducing Scaling Injuries Underground Mining	8/1/2005	7/31/2008
IR01OH008080-01A1	Lungu	University of Alabama-Birmingham	Absorption of Gas Phase Contaminants	8/1/2005	7/31/2008
IR43OH008497-01	Majumdar	Compact Membrane Systems, Inc.	Enhanced Management of Ethylene Oxide Sterilizers	8/15/2005	8/15/2006
5R44OH007673-03A	Masterman	Robert C. Byrd Technology Center	Bioelectric Telemetry System for Fire Fighter Safety	9/1/2004	8/31/2006
IR03OH008354-01	Sun	The University of Texas at Austin	Multipurpose Protective Clothes for Emergency Responders	4/1/2005	3/31/2007
5R44OH004173-03A	Wiesmann	Biostar, Inc.	SCBA Oximetry for Fire Fighter Physiologic Monitoring	9/30/2000	8/31/2006
Exposure Assessment					
5R01OH007680-04	Baum	Oak Crest Institute of ScienceE	Real-time In Situ Aerosol Monitoring In Mine Atmospheres	9/1/2002	8/31/2007
5R01OH003900-04	Cheng	Lovelace Biomedical & Environmental Res	Inhalation Dosimetry/exposure Index of Fiber Aerosol	9/1/2002	8/31/2007

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5R01OH007866-02A	Day	University of Pittsburgh	in Human Respiratory Health Effects of Radiation Exposures in Russian Workers	9/1/2004	6/30/2007
1K01OH008298-01A	Erdal	The Board of Trustees of the University of Illinois	Fundamental Study of Welding Fume Inhalation	8/1/2005	7/31/2008
5R44OH007465-03	Fauli	Eltron Research, Inc	Real-time Personal Monitor for the Drycleaning Industry	9/1/2001	8/31/2006
5R01OH007529-04	Kasting	University of Cincinnati	Improved Methods for Dermal Exposure Estimation	9/1/2002	8/31/2006
5R01OH007803-03	Loomis	University of North Carolina Chapel Hill	Chrysothile: New Exposure Indices and Cancer Epidemiology	9/30/2003	9/29/2007
5K01OH008029-02A	MAINELIS	Rutgers The State University of NJ New Brunswick	Evaluation of Portable Samplers for Viable Bioaerosols	9/1/2004	8/31/2007
2R01OH003628-04A	Mathew	University of Maryland	Statistical Methodologies for Exposure Assessment	5/1/2005	4/30/2008
5R01OH007598-03	Nylander-French	University of North Carolina, Chapel Hill	Dermal Exposure to 1,6-hexamethylene Diisocyanate	8/1/2003	7/31/2006
1R01OH008513-01	Ramachandran	Regents of the University of Minnesota	Expert Decision-making in Exposure Assessment	8/1/2005	7/31/2008
5R01OH007841-04	Reynolds	Colorado State University	New Methods for Eval of Organic Dust Aerosols - Colorado	8/1/2002	7/31/2007
5R01OH007495-03	Rosenman	Michigan State University	Genetic/exposure Interaction In Beryllium Disease	8/1/2003	7/31/2006
1R03OH008130-01A	Rosner	Clarkson University	A New Air Sampling System for Long-Term Sampling	8/1/2005	7/31/2008
5R01OH003658-05	Thrall	Battelle Pacific Northwest Laboratories	Dermatopharmacokinetics: In Vivo Analysis of Solvents	9/30/2003	9/29/2006
5R01OH002984-08A	Vincent	University of Michigan at Ann Arbor	Workplace Aerosol Sampling At Realistic Low Windspeeds	9/1/1994	8/31/2007
2R01OH007364-04	Yadav	University of Cincinnati	Mycobacteria in Metalworking Fluids	9/30/2001	6/30/2008
Health Services					
5K01OH007922-03	Rischitelli	Oregon Health & Science University	Geographic Variation In Spine Care Among Injured Workers	9/30/2003	9/29/2006
Intervention Effectiveness					
1R01OH008554-01	Abraham	Purdue University	Safety of Nighttime Construction Activities	2/1/2005	3/15/2010
5U01OH008110-03	Donham	University of Iowa	Certified Safe Farm Evaluating Health Insurance Claims	9/1/2003	8/31/2007
5R25OH008319-02	Grayson	University of Missouri-Rolla	Western U.S. Mining Safety and Health Training and Translation Center	9/1/2004	8/31/2009
1R01OH008716-01	Karmis	Virginia Polytechnic Institute and State University	Virtual Environment (VE) Applications to Improve Mining Health and Safety Training	8/1/2005	7/31/2008

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IR01OH008676-01	Kittelson	University of Minnesota	A New Method for Real-Time Measurement of Diesel Aerosols	8/1/2005	7/31/2008
IR01OH008375-01	Lipscomb	Duke University	Effectiveness of Patient Lift Equipment	8/1/2005	7/31/2009
5R01OH008153-02	May	Mary Imogene Bassett Hospital	Evaluation of an Ergonomically Improved Apple Bag	9/1/2004	8/31/2007
5R01OH007817-03	Mendeloff	University of Pittsburgh at Pittsburgh	Causes and Effects of Compliance With Osha Standards	6/1/2003	5/31/2006
5U01OH008091-03	Miles	University of California-Davis	Ergonomic Partnership to Address Treefruit Worker Injury	9/30/2003	9/29/2007
5R01OH003884-05	Parker	Park Nicollet Institute	Effectiveness of Machine Guarding Intervention	9/30/2001	9/29/2007
IR25OH008542-01	Reynolds	Colorado State University	National Agricultural Tractor Safety Initiative	9/1/2005	8/31/2007
IR01OH008078-01A	Seixas	University of Washington	Training and Reinforcement on Hearing Protection Device Use	4/30/2005	4/29/2009
Risk Assessment Methods					
5R01OH008087-02	Xue	Albert Einstein College of Medicine	Occupational Cohorts: Confounder/effect-modifier Models	9/1/2004	8/31/2007
Social and Economic Consequences of Occupational Injury and Disease					
IR01OH007953-01A	Campbell	Johns Hopkins University	Workplace Violence Nursing Health and Employment Outcomes	9/1/2005	8/31/2008
5R01OH004069-05	Franklin	University of Washington	Disability Risk In Work-related Musculoskeletal Injury	9/30/2001	9/29/2006
5K01OH007999-03	Galizzi	University of Massachusetts-Lowell	On-the-Job Inquiry: Employment History and Hidden Losses	9/1/2003	8/31/2006
IR01OH8248-01	Leigh	University of California-Davis	Costs of Occupational Injury and Illness	6/1/2005	5/31/2010
5R01OH007900-02A	Tompa	Institute for Work and Health	Post Accident Earning and Benefits Adequacy and Equity	6/30/2004	6/29/2007
Surveillance Research Methods					
5R01OH007830-03	Dischinger	University of Maryland-Baltimore	A Comprehensive Surveillance of Occ Injury In Maryland	7/10/2003	7/9/2006
Other Occupational Safety and Health					
IR13OH008493-01	McLellan	American College of Occ. & Environ. Med. (ACOEM)	Occupational Health Coordinating Group Advisory Committee	4/30/2005	3/31/2006
IR13OH008565-01	Sewell	Council of State and Territorial Epidemiologists	State-Based Occupational Health Surveillance	8/1/2005	7/31/2010
IR13OH008566-01	Keifer	University of Washington	2nd International Scientific Conference on Occupational and Environmental Health	9/1/2005	2/28/2006

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IR13OH008567-01	Martin	Oregon Health and Science University	Prevention of Noise-Induced Hearing Loss in Children and Adolescents	9/1/2005	8/31/2006
IR13OH008575-01	Davis	Cleveland Clinic Lerner College of Medicine	XXth Congress of the International Society of Biomechanics (ISB2005)	9/1/2005	1/31/2006
IR13OH008744-01	Lin	National Safety Council	VXIIth World Congress on Safety and Health at Work: Financial Assistance Program	9/1/2005	12/31/2005
IR13OH8577-01A1	Keita Kirkland	American Psychological Association	Work, Stress, and Health 2006: Making a Difference	9/1/2005	8/31/2006
IR25OH008593-01		Association of Occupational and Environmental Clinics	Research in Training and Education in OHS	9/1/2005	9/30/2008
IU50CC425070-01	Haynes	Morehouse College	IMHOTEP	9/9/1994	9/29/2010
IU60OH008463-01	St. Louis	Connecticut Department of Public Health, Division of Environmental Health	Connecticut Occupational Health Surveillance	7/1/2005	6/30/2008
IU60OH008466-01	Rosenman	Michigan State University	Enhanced Program in Occupational Injury and Illness Surveillance	7/1/2005	6/30/2010
IU60OH008468-01	Harrison	California Department of Health Services	California Occupational Safety and Health Surveillance	7/1/2005	6/30/2010
IU60OH008470-01	Dugas	Louisiana State Department of Public Health	Occupational Health and Injury Surveillance in Louisiana	7/1/2005	6/30/2008
IU60OH008472-01	Heumann	Oregon State Department of Human Services	Oregon Worker Illness and Injury Prevention Program	7/1/2005	6/30/2010
IU60OH008474-01	Gelberg	New York State Department of Health	Occupational Safety and Health Surveillance in New York	7/1/2005	6/30/2006
IU60OH008475-01	Archer	Oklahoma State Dept of Health	Oklahoma Occupational Safety and Health Surveillance	7/1/2005	6/30/2008
IU60OH008483-01	Auslander	Kentucky State Department for Health Services	Kentucky Occupational Safety and Health Surveillance	7/1/2005	6/30/2008
IU60OH008484-01	Anderson	Wi Bureau of Environmental and Occupational Health	Wisconsin Occupational Safety and Health Surveillance Program	7/1/2005	6/30/2008
IU60OH008485-01	Valiante	New Jersey Department of Health and Senior Services	New Jersey Fundamental and Expanded Occupational Health Surveillance	7/1/2005	6/30/2010
IU60OH008486-01	Mulloy	University of New Mexico Health Sciences Center	New Mexico Occupational Health Surveillance	7/1/2005	6/30/2008
IU60OH008487-01	Bonauto	Washington State Department of Labor and Industries	Washington Occupational Surveillance Program	7/1/2005	6/30/2010
IU60OH008490-01	Davis	Massachusetts Department of Public Health	Expanded Occupational Health Surveillance in MA	7/1/2005	6/30/2010
2R01OH007650-03A	Tollerud	University of Louisville	Health Effects of Occupational Exposures in PGDP Workers	7/1/2005	6/30/2008
5R25OH008296-02	Eijkemans	World Health Organization (WHO)	WHO Global Occupational Health Programme	9/30/2004	7/31/2007
5U01OH007869-04	Lamar	International Association Fire Fighters	Hazardous Substance Training for Emergency Responders	9/30/2002	9/29/2007
5U10OH008216-02	Luft	Research Foundation of the NY State University	Clinical Services for World Trade Center Responders	7/15/2004	7/14/2009

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5U100H008223-02	Harrison	NY University School of Medicine	NYU World Trade Center Responder Health Consortium	8/13/2004	8/12/2009
5U100H008225-02	Herbert	Mount Sinai School of Medicine	WTC Responder Health Consortium Clinical Center	7/15/2004	7/14/2009
5U100H008232-02	Levin	Mount Sinai School of Medicine	WTC RHC Data and Coordination Center	6/1/2004	5/31/2009
5U100H008239-02	Udasin	UMDNJ-Robert W Johnson Medical School	Clinical Center for Monitoring Health in WTC Responders	7/1/2004	6/30/2009
5U100H008242-02	Prezant	New York City Fire Department	NYC Fire Dept. Data Coordinating Ctr for WTC Medicals	7/1/2004	6/30/2009
5U100H008243-02	Kelly	New York City Fire Department	NYC Fire Dept. Clinical Center for WTC Medicals	7/1/2004	6/30/2009
5U100H008275-02	Markowitz	Research Foundation of CUNY	Queens Ground Zero Workers Health Watch	6/1/2004	5/31/2009
5U190H008308-02	Kleiner	Virginia Polytechnic Institute & State University	Program Project to Support Construction Safety and Health	9/15/2004	6/30/2009
5U500H007541-05	Levin	University of Texas Health Center at Tyler	Southwest Center for Agricultural Safety and Health	9/30/2001	9/29/2006
5U500H007542-05	May	Mary Imogene Bassett Hospital	The Northeast Center of Agricultural Safety and Health	9/30/2001	9/29/2006
5U500H007544-05	Fenske	University of Washington	Pacific Northwest Agricultural Safety and Health Center	9/30/2001	9/29/2006
5U500H007547-05	McKnight	University of Kentucky	Southeast Center for Agricultural Health and Injury Prevention	9/30/2001	9/29/2006
5U500H007548-05	Sanderson	University of Iowa	Great Plains Center for Agricultural Health	9/30/2001	9/29/2006
5U500H007550-05	Schenker	University of California Davis	Agricultural Health and Safety Center of UC Davis	9/30/2001	9/29/2006
5U500H007551-05	Sabella	East Carolina University	A Southeastern Regional Center for Agromedicine	9/30/2001	9/29/2006
5U500H008085-03	Reynolds	Colorado State University	High Plains Intermountain Center for Agriculture Health & Safety	9/15/2003	9/14/2006
5U500H008107-03	Lec	Marshfield Clinic	National Childrens Center for Rural & Agricultural Health & Safety	9/30/2003	9/29/2008
5U500H008108-03	Bean	Ohio State University	Ohio Regional Center for Agricultural Disease and Injury	9/30/2003	9/29/2006
5U540H008307-02	Stafford	The Center to Protect Workers' Rights, Inc.	Centers for Construction Safety and Health	9/1/2004	6/30/2009
5U600H008324-02	Heumann	Oregon State University	Oregon Face Project	9/1/2002	8/31/2006
5U600H008325-02	Hetzler	Nebraska Workforce Development, Department of Labor	(FACE) Nebraska	9/1/2002	8/31/2006
5U600H008326-02	Harrison	California Department of Health Services	(FACE) California	9/1/2001	8/31/2006
5U600H008328-02	Islam	Department of Health and Family Services	(FACE) Wisconsin	9/1/2001	8/31/2006
5U600H008329-02	Peck	Michigan Department of Labor and Economic Growth	(FACE) Michigan	9/30/2002	9/29/2006
5U600H008330-02	Gelberg	New York State Department of Health	(FACE) New York	9/1/2001	8/31/2006

Table 8 – All FY 2005 Grants Grouped by NORA Priority Area

NORA Area:		Investigator	Institution	Project Title	Project Start	Project End
5U600H008331-02	Davis	Massachusetts Dept of Public Health	(FACE) Massachusetts	9/1/2001	8/31/2006	
5U600H008336-02	Cohen	Washington State Department of Labor & Industries	(FACE) Washington	9/1/2002	8/31/2006	
5U600H008340-02	Hull-Jilly	Alaska Department of Health and Social Services	(FACE) Alaska	9/1/2001	8/31/2006	
5U600H008342-02	Archer	Oklahoma State Department of Health	(FACE) Oklahoma	9/30/2002	9/29/2006	
5U600H008343-02	Thayer	West Virginia Department of Health & Human Services	(FACE) West Virginia	9/1/2001	8/31/2006	
5U600H008344-02	Bender	Minnesota Department of Health	(FACE) Minnesota	9/1/2001	8/31/2006	
5U600H008345-02	Bost	New Jersey Department of Health & Senior Services	(FACE) New Jersey	9/1/2001	8/31/2006	
5U600H008350-02	Williams	Kentucky Department for Public Health	(FACE) Kentucky	9/1/2002	8/31/2006	
5U600H008398-02	Kraemer	Iowa Department of Public Health	(FACE) Iowa	9/1/2001	8/31/2006	
5U600H317613-05	Parazino	Association of Occupational and Environmental Clinics	Research, Prevention Education, and Clinical Services In Occupational Safety and	9/30/1999	9/29/2005	
Training and Education						
Education and Research Centers (ERC)						
IT420H008412-01	Hinds	University of California Los Angeles	Southern California Education and Research Center	7/1/2005	6/30/2009	
IT420H008414-01	Hegmann	University of Utah	Utah ERC	7/1/2005	6/30/2007	
IT420H008416-01	Christiani	Harvard School of Public Health	Occupational Safety and Health Education and Research Center	7/1/2005	6/30/2008	
IT420H008421-01	Delclos	Univ of Texas Health Science Center at Houston	Southwest Center for Occupational and Environmental Health	7/1/2005	6/30/2010	
IT420H008422-01	Moline	Mount Sinai School of Medicine	NIOSH (Region II) Educational Resource Center: OS&H Professionals	7/1/2005	6/30/2010	
IT420H008428-01	Agnew	John Hopkins University	Education and Research Center (ERC)	7/1/2005	6/30/2007	
IT420H008429-01	Spear	University of California	OS & H Training Grant - Northern CA ERC	7/1/2005	6/30/2007	
IT420H008432-01	Clark	University of Cincinnati	Education and Research Center	7/1/2005	6/30/2010	
IT420H008433-01	Seixas	University of Washington	Education and Research Center	7/1/2005	6/30/2010	
IT420H008434-01	Greaves	University of Minnesota	Occupational Safety & Health Education & Resource Ctr	7/1/2005	6/30/2007	
IT420H008436-01	Oestenstad	University of Alabama at Birmingham	Deep South ERC	7/1/2005	6/30/2007	
IT420H008438-01	Brooks	University of South Florida	Educational Resource Center Training Grants	7/1/2005	6/30/2007	
IT420H008455-01	Robins	The University of Michigan	The University of Michigan Education & Research Center	7/1/2005	6/30/2010	
IT420H008491-01	Sprince	The University of Iowa	Occupational Safety and Health Training Grant	7/1/2005	6/30/2008	
IT420H008672-01	Conroy	University of Illinois at Chicago	Grants for Education Programs in OS&H, ERC	7/1/2005	6/30/2008	

Table 8 – All FY 2005 Grants Grouped by NORA Priority Area

NORA Area: Grant Number	Investigator	Institution	Project Title	Project Start	Project End
IT420H008673-01	Rogers	University of North Carolina at Chapel Hill	Occupational Research and Health Education Center	7/1/2005	6/30/2006
Training Project Grants (TPG)					
IT01OH008402-01	Sorrell	University of Wisconsin-Stout	'Curricular Enhancement in Safety/Risk Control	7/1/2005	6/30/2010
IT01OH008404-01	Fonooni	University of Minnesota Duluth	Grants for Education in Occupational Safety and Health	7/1/2005	6/30/2010
IT01OH008407-01	Funk II	Oregon State University	Occupational Safety and Health Training Program	7/1/2005	6/30/2006
IT01OH008408-01	Zey	Central Missouri State University	TPG CMSU Industrial Hygiene Master Program	7/1/2005	6/30/2008
IT01OH008409-01	Mueller	University of Colorado Health Sciences Center	Occupational Medicine Residency Training Support	7/1/2005	6/30/2010
IT01OH008410-01	Reynolds	Colorado State University	Industrial Hygiene Training Program	7/1/2005	6/30/2010
IT01OH008417-01	McCauley	University of Pennsylvania	Masters Education in Occupational Environmental Health	7/1/2005	6/30/2007
IT01OH008424-01	Ellenbecker	University of Massachusetts Lowell	Occupational Health and Safety Training Grant	7/1/2005	6/30/2010
IT01OH008430-01	Samimi	San Diego State University	NIOSH Graduate Training in Occupational Safety and Health	7/1/2005	6/30/2010
IT01OH008431-01	Martin	West Virginia University	Appalachian Training Program in Occupational Health and Safety	7/1/2005	6/30/2010
IT01OH008435-01	Hammer	Portland State University	Graduate Training in Occupational Health Psychology	7/1/2005	6/30/2010
IT01OH008437-01	Kraemer	Murray State University	Occupational Safety and Health Program Improvement	7/1/2005	6/30/2010
IT01OH008439-01	Gulfey	West Virginia University	Training Grant for Industrial Hygiene	7/1/2005	6/30/2010
IT01OH008605-01	Bisesi	Medical College of Ohio	NIOSH Training Project Grant (TPG) - Industrial Hygiene	7/1/2005	6/30/2009
IT01OH008607-01	Cullen	Yale University	Occupational Safety and Health Training Grant	7/1/2005	6/30/2006
IT01OH008609-01	Tolbert	Rollins School of Public Health	Graduate Training Program	7/1/2005	6/30/2007
IT01OH008610-01	Henning	University of Connecticut	Work Organization and Health Psychology	7/1/2005	6/30/2006
IT01OH008611-01	Khalil	University of Miami	Occupational Safety and Health Training Grant	7/1/2005	6/30/2009
IT01OH008612-01	Meyer	University of Connecticut	Occupational and Environmental Medicine Residency Training (TPG)	7/1/2005	6/30/2009
IT01OH008613-01	Nussbaum	Virginia Tech	Occupational Safety and Health Training Grant	7/1/2005	6/30/2006
IT01OH008614-01	Phillips	University of Oklahoma	Industrial Hygiene Training Grant	7/1/2005	6/30/2009
IT01OH008615-01	Rosenthal	Purdue University	Occupational Safety and Health Training Grant	7/1/2005	6/30/2006
IT01OH008616-01	Schwertha	University of Pittsburgh	Graduate Training Programs	7/1/2005	6/30/2006
IT01OH008617-01	Smith	Texas Tech University	Occupational Ergonomics	7/1/2005	6/30/2009
IT01OH008618-01	Behm	East Carolina University	East Carolina University Occupational Safety and Health Consortium	7/1/2005	6/30/2006
IT01OH008619-01	Gonzalez	University of Puerto Rico	Education Programs in Occupational Safety and Health	7/1/2005	6/30/2008
IT01OH008620-01	Feigley	University of South Carolina	Graduate Education in Occupational Epidemiology	7/1/2005	6/30/2009
IT01OH008628-01	Emmett	University of Pennsylvania	Occupational Safety and Health Training Grant	7/1/2005	6/30/2008
IT01OH008629-01	Grimmsley	Tulane University	Grants for Education Programs in OS&H - #03001	7/1/2005	6/30/2006
IT01OH008630-01	Jensen	Montana Tech	Combined Undergraduate and Graduate Training	7/1/2005	6/30/2008

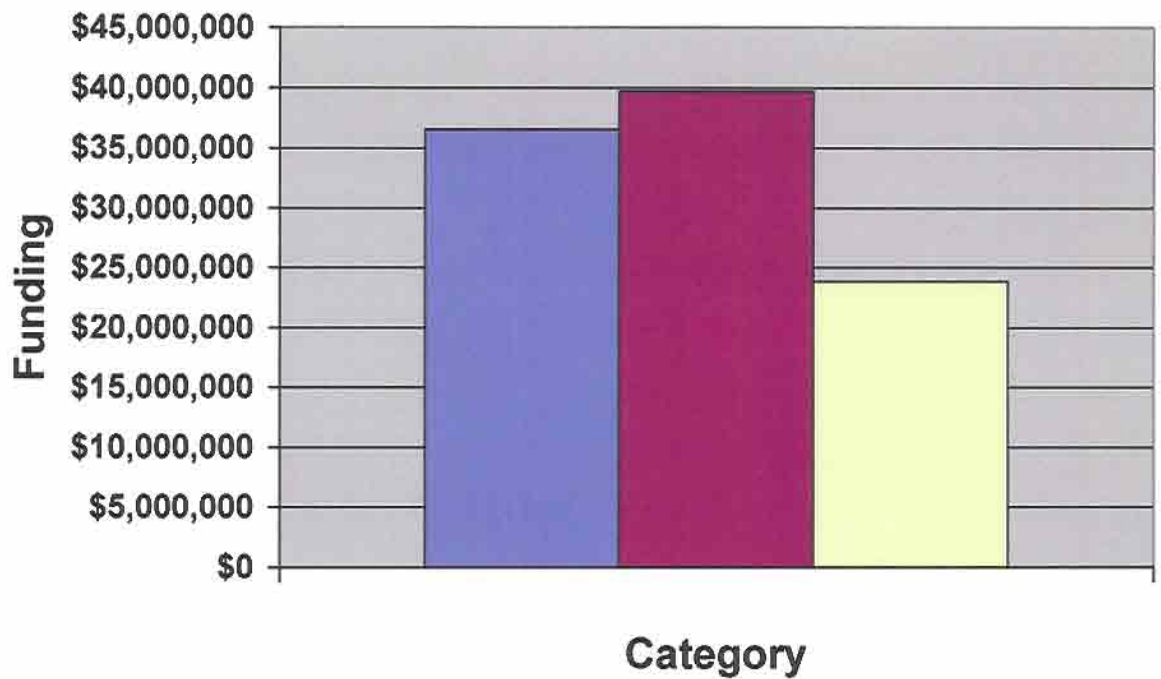
Table 8 – All FY 2005 Grants Grouped by NORA Priority Area

NORA Area: Grant Number	Investigator	Institution	Project Title	Project Start	Project End
IT01OH8608-01	Darcey	Duke University Medical Center	Program	7/1/2005	6/30/2006
IT02OH008606-01	Carter Sr.	North Carolina A & T State University	Occupational Safety and Health Training	7/1/2005	6/30/2007
IT02OH008622-01	Anna	Millersville University	Campus and Distance Learning Enhancement in OSH Training Grants	7/1/2005	6/30/2009
IT02OH008623-01	Boepple	Trinidad State Junior College	Occupational Safety Training via Distance Learning	7/1/2005	6/30/2007
IT02OH008624-01	Figueroa	University of North Alabama	Occupational Safety and Health Training Grant	7/1/2005	6/30/2009
IT02OH008625-01	George	Western Kentucky University	Industrial Hygiene Curriculum at Western Kentucky Univ	7/1/2005	6/30/2006
IT02OH008626-01	Ryan	Central Maine Community College	Undergraduate Training Progs CMCC awards AAS & Certification in OHS	7/1/2005	6/30/2007
IT02OH008627-01	Worchel	University of Hawaii at Hilo	Occupational Safety and Health: A Behavioral Approach	7/1/2005	6/30/2006
IT15OH008631-01	Dzugan	Alaska Marine Safety Education Assn (AMSEA)	Continuing Education Grant - F/V Safety	7/1/2005	6/30/2006

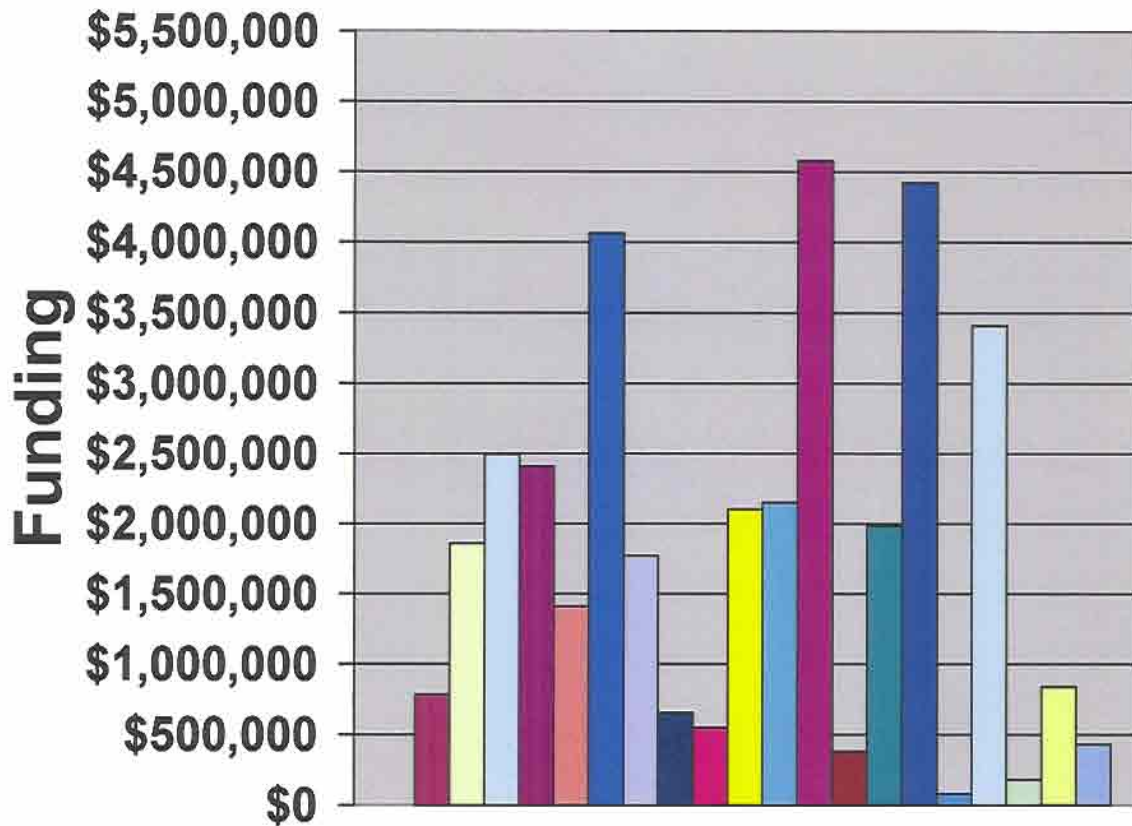
Overall Funding Levels

Summary budget information for the FY 2005 awards listed in the previous table (Table 8) are presented in the following two charts.

FY 2005 Funding Categorized by NORA, OSH, and Training



FY 2005 NORA Funding Categorized by NORA Area



NORA Area

- Allergic & Irritant Dermatitis (none)
- Asthma & COPD
- Fertility & Pregnancy Abnormalities
- Hearing Loss
- Infectious Diseases
- Musculoskeletal: Low Back
- Musculoskeletal: Upper Extrem
- Traumatic Injuries
- Emerging Technologies
- Indoor Environment
- Mixed Exposures
- Organization of Work
- Special Populations
- Cancer Research Methods
- Control Technology
- Exposure Assessment
- Health Services
- Intervention Effectiveness
- Risk Assessment Methods
- Social & Economic Consequences
- Surveillance Research Methods

Links to Important References:

To sign up for the NIOSH OEP listserv which transmits updates about OEP programs by email:

<http://www.cdc.gov/niosh/oep/oepsignup.html>

NIOSH OEP Web site:

<http://www.cdc.gov/niosh/oep/>

NIOSH main Web site:

<http://www.cdc.gov/niosh/homepage.html>

CDC main Web page:

<http://www.cdc.gov/>

Information on NORA:

<http://www2a.cdc.gov/NORA/default.html>

Information on r2p:

<http://www.cdc.gov/niosh/r2p/>

Grants.gov:

<http://www.grants.gov/>

NIH Guide for Grants and Contracts:

<http://grants1.nih.gov/grants/guide/index.html>

Application forms posted on the NIH Web site:

<http://grants1.nih.gov/grants/forms.htm>

NIH Grants Policy Statement:

http://grants1.nih.gov/grants/policy/nihgps_2003/index.htm

HHS GrantsNet:

<http://www.hhs.gov/grantsnet/>

Computer Retrieval of Information on Scientific Projects (CRISP):

<http://www.crisp.cit.nih.gov/>