

**Michael Silverstein, M.D., M.P.H.**  
Keynote Speaker



Michael Silverstein, M.D., M.P.H., currently serves as the Chair of the National Advisory Committee on Occupational Safety and Health. He most recently served as the Assistant Director for Industrial Safety and Health in the Washington State Department of Labor and Industries (L&I), where he led the Department's Division of Occupational Safety and Health with responsibility for managing the state's Occupational Safety and Health Administration program.

Prior to working at L&I Dr. Silverstein worked for the Washington State Department of Health as State Health Officer and Epidemiologist and spent two years in Washington, D.C. as Director of Policy for the Occupational Safety and Health Administration (OSHA). For 15 years prior he was Assistant Director for Occupational Health and Safety with United Automobile Workers Union in Detroit, Michigan. He began working at L&I in 1997 and in 2005 spent 4 years away from state government as a Clinical Professor at the University of Washington School of Public Health and as a private consultant.

Dr. Silverstein has practiced family and occupational medicine in Michigan and California. He has degrees from Harvard University, Stanford Medical School, and the University of Michigan School of Public Health and has board certification as a specialist in occupational medicine.

Dr. Silverstein has been an active member of several professional associations including the American Public Health Association, where he served as the Chairman of the Occupational Safety and Health Section, and the American College of Occupational and Environmental Medicine, where he served as a member of the Ethics Committee. He has authored numerous scientific research and policy articles, including recent publications on the regulatory process, the future of OSHA, and asbestos cancer risk assessment. Dr. Silverstein has served on several Institute of Medicine panels, including those addressing the safety and health of older workers, the protection of young workers, hearing loss prevention and the medicine of extreme environments.

**Alice Hamilton Award**  
for Excellence in  
Occupational Safety and Health

**James P. Keogh Award**  
for Outstanding Service in  
Occupational Safety and Health

**Bullard-Sherwood  
Research-to-Practice  
(r2p) Award**  
for Outstanding Application  
of Occupational Safety  
and Health Research

**Director's  
Intramural Award**  
for Extraordinary Science

**April 26, 2012**

National Institute for Occupational Safety and Health

## Alice Hamilton, M.D.

Many of the first laws and regulations passed to improve the health of workers were the direct result of the work of one dedicated and talented woman, Alice Hamilton, M.D. Born into a prominent family in Indiana (her sister is the well-known classicist, Edith Hamilton), Dr. Hamilton graduated from medical school at the University of Michigan in 1893. After accepting a teaching position at the Women's Medical School of Northwestern University in 1897, she moved into Jane Addams' Hull House in Chicago. There she opened a well-baby clinic for poor families in the local settlement house neighborhood. As she acquainted herself with the families, she learned of their pains, strange deaths, lead palsy, and "wrist drop," and of the high numbers of widowed women. Encouraged by the reformers of Hull House, she began to apply her medical knowledge to these social problems and thus began her scientific inquiry into occupational health for which she became known.



Dr. Hamilton quickly realized that while some progress in understanding occupational illness and disease was being made in Europe, little was written or understood about occupational disease conditions in the U.S. In 1908, she published one of the first articles on occupational disease in this country and was soon a recognized expert on the topic. Starting in 1910, under the sponsorship initially of a commission of the State of Illinois, and later the Federal Bureau of Labor Statistics, she conducted a series of brilliant explorations of occupational toxic disorders. Relying primarily on "shoe leather epidemiology" and the emerging laboratory science of toxicology, she pioneered occupational epidemiology and industrial hygiene in the U.S. Her findings were so scientifically persuasive that they caused sweeping reforms, both voluntary and regulatory, to improve the health of workers.

In 1919, Dr. Hamilton was appointed Assistant Professor of Industrial Medicine at Harvard Medical School, becoming the first female faculty member at Harvard University. Between 1924 and 1930, she also served for two terms on the Health Committee of the League of Nations. When she retired from Harvard at the age of sixty-six, she became a consultant to the U.S. Division of Labor Standards and served as President of the National Consumers League.

## Director's Intramural Award for Extraordinary Science

The Director's Intramural Award for Extraordinary Science recognizes outstanding contributions by intramural scientists and support staff to science excellence at NIOSH. Science excellence is the foundation upon which NIOSH generates new knowledge, interventions, and technologies to assure safe and healthful work for all. Winners will receive a monetary award that augments the discretionary budget of the recipient for the following fiscal year.

Individuals eligible for nomination for this award include current NIOSH staff in the following Divisions, Laboratories, and Offices:

- Alaska Pacific Regional Office
- Division of Applied Research and Technology
- Division of Respiratory Disease Studies
- Western States Office
- Division of Surveillance, Hazard Evaluations, and Field Studies
- Division of Safety Research
- Education and Information Division
- Health Effects Laboratory Division
- National Personal Protective Technology Laboratory
- Office of Mine Safety and Health Research

The scientific contributions proposed as the basis for nomination may include only those activities and endeavors undertaken at NIOSH. Past winners of the award may not be nominated again for the same category. Individuals in the Office of the Director, except as noted above, are not eligible for this award.

Categories for the Director's Intramural Award for Extraordinary Science:

**Distinguished Career Scientist** is a permanent employee or fellow who has made extraordinary scientific contributions in his or her field of work. The monetary award will be a \$10,000 supplement to the winner's project CAN.

**Early Career Scientist** is a permanent employee or fellow who has received a masters or doctorate in a scientific discipline within the five years prior to nomination and has made extraordinary individual research and scientific contributions in his/her field of work. The monetary award will be a \$5,000 supplement to the winner's project CAN.

**Scientific Support** is for a technical or administrative staff member who provides invaluable contributions to the successful completion of NIOSH scientific activities. The monetary award will be a \$2,500 supplement to the winner's project CAN.

Information regarding the nomination process may be found on the Office of the Associate Director for Science website at:  
<http://od.niosh.cdc.gov/ADSO/Default.htm>



Alice Hamilton Award  
James P. Keogh Award  
Bullard-Sherwood Research-to-Practice (r2p) Award  
Director's Intramural Award for Extraordinary Science

Introduction	John Howard, M.D. Director, NIOSH Presenting from Taft-Cincinnati, OH	<i>Epidemiology and Surveillance</i>	John Howard, M.D.
		<i>Exposure and Risk Assessment</i>	John Howard, M.D.
<i>James P. Keogh Award</i>		<i>Laboratory and Methods</i>	John Howard, M.D.
Keynote Speech	Michael Silverstein, M.D., M.P.H. Olympia, WA	<i>Bullard-Sherwood r2p Awards</i>	John Howard, M.D.
<i>Alice Hamilton Awards</i>		<i>Director's Intramural Awards for Extraordinary Science</i>	John Howard, M.D.
<i>Education and Guidance</i>	John Howard, M.D.	Closing Remarks	John Howard, M.D.
<i>Engineering and Control</i>	John Howard, M.D.	Reception immediately following the program	



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## Bullard-Sherwood Research-to-Practice (r2p) Award

NIOSH presents the Bullard-Sherwood Research-to-Practice (r2p) Award to recognize outstanding efforts by its scientists and their partners in applying occupational safety and health research to prevent work-related injury, illness, and death. The award is named in honor of two distinguished individuals who have made significant contributions to workplace injury and illness prevention.

Edward W. Bullard designed the first “hard hat” as protective headgear for miners. He combined his experience with doughboy Army helmets during World War I and his understanding of customer needs to develop the “Hard Boiled Hat.” The name was derived from the use of steam during the hat manufacturing process. Joseph Strauss, the engineer in charge of constructing the Golden Gate Bridge, requested that Mr. Bullard adapt his mineworker helmet to help protect Bridge workers from falling rivets. The Bridge site became the first designated “Hard Hat Construction Area.” In related history, the steel used in the building of the Bridge oxidized during transport to San Francisco from Pennsylvania, and therefore required sandblasting before it could be painted. As a result, Mr. Bullard designed and sold another helmet to the Bridge builders to specifically protect the sandblasting workers. This helmet was similar to the Hard Boiled Hat but included a hood or “canopy” over the hat, a window to see through, and supplied air for respiratory protection in its design. Today, approximately six million hard hats, also known as skull buckets, are sold annually throughout the world to protect workers. Bullard’s family-owned company, now entering its fifth generation, still produces many of those hard hats as well as more modern sandblasting helmets.

R. Jeremy (Jerry) Sherwood successfully merged research and industrial hygiene by inventing the first practical personal sampling pump in the late 1950s. He identified a need for sampling pumps that could be worn by workers and not impede their work processes. Until then, sampling was done on an area basis or an industrial hygienist followed a worker while carrying heavy, bulky, and short-term sampling equipment. Using the newly developed personal sampling pump, he demonstrated that area sampling often severely underestimated worker exposures. Within a few years of this invention, personal sampling pumps became the staple in industrial hygiene work that they are today. He also developed a miniature sampler for sulfur dioxide, which became commercially available and was widely used throughout Europe. His research on respirators led to the first fit testing. While at the International Labour Organization and later at the World Health Organization, Mr. Sherwood put his own knowledge and research experiences into practice by training others in occupational safety and health, particularly in developing countries. This became one of his greatest passions and many workers around the world have benefitted from his efforts.

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## James P. Keogh Award



NIOSH is pleased to recognize one current or former employee each year for outstanding service to the field of occupational safety and health. This award honors the contributions made by public health workers who fight long odds to achieve safer and healthier workplaces.

James P. Keogh, M.D. was a tireless advocate for worker safety and health who died in June 1999 at the age of 49. His earliest work in academic medicine identified dimethylaminopropionitrile as the causal agent in an outbreak of bladder neuropathy in the 1970s. Dr. Keogh was able to make this determination because, unlike many of the clinicians initially contacted by the workers, he took their complaints seriously and applied clear public health principles to his investigation. Throughout his life, he listened carefully to workers, characterized hazards and diseases, and then fearlessly worked to identify compensation for the individual and prevention strategies for others. Dr. Keogh was instrumental in the inclusion of construction workers in the Maryland Occupational Safety and Health lead standard, a full decade before the Federal standard did the same. He was a leading medical educator who always focused on the need to incorporate clinical compassion with public health prevention. His most outstanding legacy, however, was his fierce determination to put knowledge into practice to benefit the worker.

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