

NIEHS awards Superfund occupational and safety training grants

By Sara Mishamandani

The NIEHS Superfund Research Program (SRP) welcomes the Harvard School of Public Health, University of Minnesota, and University of Washington as newly funded [Occupational and Safety Training Education Programs on Emerging Technologies \(R25\)](https://tools.niehs.nih.gov/srp/programs/r25current.cfm) (<https://tools.niehs.nih.gov/srp/programs/r25current.cfm>) grantees.

"This research education program was developed to highlight SRP's interest in emerging technologies. We determined that there was a need for this type of training through interaction with the public, previous and current grantees, and our colleagues from the U.S. Environmental Protection Agency and Agency for Toxic Substances and Disease Registry," said Danielle Carlin, Ph.D., SRP program administrator.

"I am excited about adding a new program to the SRP grant portfolio, and I think this will be an excellent opportunity for professionals and graduate students to learn about emerging technologies in the workplace, and ultimately learn about safer practices when using these technologies," she continued.

Developing curricula on occupational health and safety

These SRP grants are awarded to institutes of higher education, to develop continuing education and academic curricula on occupational health and safety management practices in areas of emerging technologies, including emerging hazardous waste products, green chemistry, and sustainable remediation. The curricula will be available to industrial hygienists, graduate students, and other personnel involved in the evaluation, management, and handling of hazardous substances.

"Emerging technologies present new health and safety challenges," said Robert Herrick, S.D., lead researcher for the R25 grant at Harvard School of Public Health. "The education programs will help further the Superfund Research Program's aim of protecting workers from the effects of hazardous substances on human health."

The awards are also collaborative in nature. Applicants were encouraged to join forces with at least two other higher education institutions, to develop the emerging technologies curricula. These partnerships broaden the knowledge and experience available, to develop innovative materials for training a variety of audiences to work safely with emerging technologies.

"As a side benefit, the award will enhance our education and training activities on all workplace health and safety topics, not just with emerging technologies, because our program faculty will learn how to develop Web-based modules on their own that can be applied to other topics," said Peter Raynor, Ph.D., lead researcher for the University of Minnesota R25 grant.

"This new SRP education program will train the next generation of health and safety professionals in advanced and emerging technologies," said SRP Director Bill Suk, Ph.D. "The people using these new tools will do so in a way that improves their work life quality."

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"We are extraordinarily grateful to NIEHS for providing this opportunity," said Herrick. "With our academic partners at the Massachusetts Institute of Technology and Tulane University, we will develop a research education program that prepares professional practitioners and researchers in the evaluation, handling, and management of hazardous substances and conditions associated with emerging technologies." (Photo courtesy of Robert Herrick)



"Our partnership with the University of Iowa and Dakota County Technical College will help all three institutions to enhance our education and research activities," said Raynor. "Our research findings will be incorporated into our educational materials, and the development of the educational materials will lead to new research ideas on which we can work collaboratively." (Photo courtesy of Peter Raynor)



"Implementation of this training will provide broad awareness and knowledge in the workplace of appropriate application of sustainable technologies and alternative chemistries among personnel engaged in scientific discovery, process development, product engineering, and worker health and safety," said Yost. (Photo courtesy of Michael Yost)

The Awardees

- Herrick and colleagues at the [Harvard School of Public Health](#) (https://tools.niehs.nih.gov/srp/programs/Program_detail.cfm?Project_ID=R25ES23635) will create an education and training program in the management of hazards associated with emerging technologies, including nanotechnology, drug delivery in healthcare, and sustainable remediation. The program will prepare professional practitioners and researchers to evaluate, handle, and manage hazardous substances and conditions associated with these emerging technologies.
- At the [University of Minnesota](#), (https://tools.niehs.nih.gov/srp/programs/Program_detail.cfm?Project_ID=R25ES23595) Raynor's team will develop a comprehensive assortment of focused, Web-based modules, to train professionals, as well as undergraduate and graduate students, to work safely with engineered nanomaterials. The modules will be designed so that they can be used by instructors to tailor education and training initiatives on the health and safety of nanotechnology to serve the unique needs of different learners.
- Lead researcher Michael Yost, Ph.D., and colleagues at the [University of Washington](#) (https://tools.niehs.nih.gov/srp/programs/Program_detail.cfm?Project_ID=R25ES23632) will focus on developing sustainable solutions to potential workplace health and safety risks associated with biotechnology, nanotechnology, alternative green chemistry, and green landscaping. The program focuses training efforts on identification and evaluation of potential health risks and environmental impacts. It will also concentrate on developing appropriate controls and substitution strategies for long-term sustainable technology solutions, to minimize potential harmful waste, reduce process hazards, and lower energy costs.

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