

NICEATM/EPA workshop on evaluating cardiovascular safety

By Cathy Sprankle

Pollutants and toxicants in the environment have the potential to damage cells in the heart and circulatory system. This type of toxicity, known as cardiovascular toxicity, is also a major reason for drug development failure. The environmental and medical aspects of cardiovascular toxicity make this research area interesting to a broad audience, including clinical researchers, environmental health researchers, government regulators, and drug developers.

Because of the broad current interest in cardiovascular toxicity, the [National Toxicology Program \(NTP\) Interagency Center for the Evaluation of Alternative Toxicological Methods \(NICEATM\)](http://iccvam.niehs.nih.gov/)

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is joining with the U.S. Environmental Protection Agency to present a workshop addressing development of new methods to assess and predict whether substances might affect cardiovascular safety in humans. The [workshop](#), “Translational Alternative Models and Biomarkers Predictive of Drug or Chemical Cardiovascular Risk,” will be held Oct. 10-11 at NIEHS.

“Cardiovascular disease is the leading cause of death in the United States,” noted Warren Casey, Ph.D., acting director of NICEATM and a co-chair of the workshop. “One objective of this workshop is to assess the role of chemical exposures in cardiovascular disease. We’re also going to be examining current approaches for identifying substances likely to cause cardiovascular toxicity, and discuss how that could be done more effectively.”

Determining whether a substance is likely to cause cardiovascular toxicity presents a number of challenges. Current approaches involve testing in animals and rely on observing effects, such as organ damage and blood chemistry changes, which provide evidence of toxicity, but little information about the mechanism of toxicity. The animal tests used by drug developers are much better at identifying the immediate acute effects than the damage that might occur after taking a drug for a long period of time. Because there are no standardized regulatory guidelines for cardiovascular toxicity testing, approaches for testing vary widely among industries, with testing practices among industrial chemical manufacturers being very different from those used by drug manufacturers.

The workshop will bring together scientists from these industries, academia, and regulatory agencies to consider new approaches to cardiovascular toxicity testing that will provide better safety and risk assessments while reducing or eliminating animal use. Participants will consider how to prioritize research initiatives in this area, and how to bring together data on test substances from various test methods and sources, to develop better cardiovascular toxicity hazard assessments.

More information about the workshop, including an agenda and registration information, is available on the NIEHS website at <http://www.niehs.nih.gov/about/visiting/events/highlight/cardiovascular-toxicity-workshop/>.

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