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New Survey Reveals Scientific Experts Concerned with Current Approaches to Government Chemical Risk Assessments

George Mason University survey respondents say science is being shortchanged in chemical risk evaluations

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Arlington, VA – A new survey on regulatory risk assessment conducted by the George Mason University Center for Media and Public Affairs and Center for Health and Risk Communication reveals widespread concern among scientific experts in toxicology and risk assessment over the application of risk assessment procedures for evaluating chemicals. The survey, which was released during a webinar hosted by the International Society of Regulatory Toxicology and Pharmacology (ISRTP), was conducted to provide a mechanism for tapping into the collective opinion of the scientific community, in order to help the public and regulators make informed decisions about chemical risk assessments.

The release of the survey comes at a time of growing concern over the scientific quality and accuracy of chemical risk assessments developed by federal programs. Questions have also been raised about the impact that occurs when such assessments are relied upon for regulatory decisions.

Scientists were surveyed on several important aspects of regulatory risk assessment of chemicals. These include the use of problem formulation and accompanying analysis plans, the acquisition and evaluation of data, the application of weight of evidence methodology, the role of peer review, and the use of scientific risk evaluations in risk management decisions.

According to study director Dr. Robert Lichter, "There is a gap between what toxicology and risk assessment experts believe should be done to determine the risks from environmental chemical exposures and what is actually put into practice in the regulatory setting. Our study shows that scientific experts believe much needs to be done to improve the way scientific information is collected, analyzed and used for determining risks. This survey highlights specific areas where scientists believe action is needed."

The main findings on risk assessment procedures, peer review and risk management are highlighted below:

- Problem Formulation: While 68% believe it is very important to complete a problem formulation and have an analysis plan in place prior to conducting a regulatory risk assessment, only 30% say that, in their experience, problem formulations were often or always conducted in advance of assessments.

- Data Acquisition: More than 90% of the scientists surveyed support the use of clear criteria for selecting and evaluating studies, but only 24% report that in their experience standardized protocols are often or always used for evaluating available data.

- Weight of Evidence: While almost 90% believe a weight of evidence methodology should be used in all risk assessments, fewer than half said such a process was often or always applied in risk assessments, and when it is used, only one of four describe it as consistent or transparent.

- Peer Review: Three out of four respondents said external peer review is very important and reviews should be conducted independent of the program that develops the assessment. Also, only one in four believe that current procedures often or always provide sufficient opportunity for input from stakeholders, and almost one in three say such input rarely or never occurs.

- Risk Management: Less than half of the experts believe risk management decisions are often or always based on the current understanding of biology and toxicology. The respondents believe risk managers give too much weight to political concerns, the media and environmental groups, and too little weight to scientific factors and economic costs and benefits.

The survey results are based on responses from 186 members of the three leading professional societies in toxicology and risk assessment: the Risk Assessment Specialty Section of the Society of Toxicology (SOT), the Dose Response Section of the Society for Risk Analysis (SRA), and the International Society for Regulatory Toxicology and Pharmacology (ISRTP). Harris Interactive, a leading survey and market research firm, in co-operation with George Mason University researchers, administered the survey. The American Chemistry Council, Crop Life America, and the International Platinum Group Metals Association provided funding for the survey.

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