

Public-Private Partnerships to Advance In Vitro Eye Irritation Testing Methods and Approaches

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The 16 U.S. government agencies that comprise the Interagency Coordinating Committee on the Validation of Alternative Methods (ICCVAM) recently released a roadmap and strategy to expedite the development, use, and regulatory acceptance of new approach methodologies that provide more human-relevant information than in vivo methods currently used in human health assessments. A central theme to realizing success is the formation of public-private partnerships that allow cross-sector communication and cooperation among federal agencies and the private sector. These provide a means for sharing knowledge, experience, and data to most efficiently advance test method development and evaluation. Such partnerships are being implemented to advance alternatives for eye irritation testing for chemicals and formulations. While multiple in vitro methods have been adopted to characterize the eye irritation potential of a wide range of substances, a complete replacement for the in vivo test method has yet to be globally accepted. Global acceptance is further confounded by the differences in requirements for hazard classification and labeling between U.S. and international regulatory authorities. As a result, international stakeholders from government, industry, academia, and non-governmental organizations are collaborating on the development of approaches for eye irritation testing that can be applied to specific types of substances, such as agrochemical formulations. We report on the international efforts to replace animal use for eye irritation testing, and provide a model for multi-stakeholder collaborations that could be applied to other areas. This was funded with U.S. federal funds from the NIEHS/NIH/HHS under Contract HHSN273201500010C.