

**ICCVAM/ECVAM Ocular Toxicity Scientific Symposia: May 11-13, 2005****I. Mechanisms of Chemically-Induced Ocular Injury and Recovery (May 11-12, 2005)*****Symposium Goals***

*To review the state-of-the-science and understanding of the pathophysiology and mechanisms of chemically-induced ocular injury and recovery (reversibility vs. irreversibility) in order to advance the development of test systems necessary to meet regulatory testing requirements and that provide for protection of human health while reducing, refining (less pain and distress), and/or replacing the use of animals.*

***Symposium Objectives***

- Review current and potential molecular, cellular, tissue (e.g., histopathology), and clinical (e.g., corneal opacity, swelling, depth of injury) biomarkers of chemical injury and recovery and their usefulness for *in vivo* and *in vitro* testing models of ocular irritancy and corrosivity.
- Identify knowledge gaps in understanding of chemically-induced ocular injury and recovery.
- Identify and prioritize future research initiatives that would address current knowledge gaps and that are considered necessary to advance the development and validation of *in vitro* models of chemically-induced ocular injury and recovery.
- Discuss and identify quantitative objective endpoints that should be considered for inclusion in the current *in vivo* rabbit eye test and/or human clinical testing (e.g., more sensitive markers of injury and recovery) that would support development and validation of predictive *in vitro* methods and improve hazard characterization and reliability.