Session: **Hypersensitivity and Autoimmunity**
9:00 AM – 12:30 PM, Wednesday, March 18
Exhibit Hall

ICCVAM Test Method Recommendations for the Reduced LLNA (rLLNA): An Alternative Test Method Using Fewer Animals to Assess the Allergic Contact Dermatitis Potential of Chemicals and Products

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Based on recommendations by ICCVAM in 1999, U.S. regulatory agencies that require the submission of skin sensitization data accepted the LLNA, with identified limitations, as an alternative to guinea pig tests for assessing allergic contact dermatitis (ACD). In January 2007, the CPSC nominated several activities related to the LLNA for evaluation by ICCVAM and NICEATM. One of the nominated activities was an assessment of the usefulness and limitations of the rLLNA. In the rLLNA, each substance is tested at one dose level only (the high dose), whereas in the traditional LLNA, a minimum of three dose levels is tested. NICEATM and ICCVAM conducted a retrospective review of traditional LLNA data from 11 different sources that included 457 unique substances tested in 471 traditional LLNA studies. The ability of the rLLNA to correctly identify potential skin sensitizers was compared to traditional LLNA results. Based on the available data, the rLLNA has an accuracy of 99% (465/471), a false positive rate of 0% (0/153), and a false negative rate of 2% (6/318) when compared to the traditional LLNA. Based on these data, ICCVAM concluded that the rLLNA is sufficiently accurate to distinguish between skin sensitizers and non-sensitizers. Therefore, ICCVAM recommends that the rLLNA test method should be routinely used for determining the ACD potential of chemicals and products. ICCVAM has also made recommendations for a standardized rLLNA protocol, future studies to potentially improve the usefulness and applicability of the rLLNA, and the use of LLNA performance standards for modified rLLNA test methods. The comprehensive ICCVAM evaluation of the rLLNA should facilitate regulatory agency decisions on the acceptability of the method. Use of the method by industry can then be expected to significantly reduce animal use for ACD testing while continuing to support the protection of human health.
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Keywords: allergic contact dermatitis; skin sensitization; murine local lymph node assay; reduced LLNA; rLLNA; alternative methods