

**PRELIMINARY LABORATORY VALIDATION AND CONCORDANCE STUDIES OF PROMEGA  
POWERPLEX™ 16 SHORT TANDEM REPEAT (STR) TYPING KITS**

**C. Barna<sup>1</sup>, D. Yet<sup>1</sup>, and T. Lawton<sup>2</sup>**

<sup>1</sup>*Michigan State Police, East Lansing, MI*

<sup>2</sup>*Forensic Masters Program, Michigan State University, East Lansing, MI*



Proper validation of new laboratory tests is required for the development and application of laboratory protocols. The DNA Advisory Board (DAB) lists essential requirements for laboratory validation of new methods under Section 8. The American Society of Crime Laboratory Directors (ASCLD) and the National Forensic Science Training Center (NSFTC) echo these concepts in their accreditation criteria. The new 16 locus multiplex is currently undergoing evaluation for CODIS applications in our laboratory.

Validation experiments for this system to date, consist of concordance studies with population samples previously typed with Applied Biosystems Ampf/STR Profiler Plus™ and COfiler™ kits, sensitivity studies, and evaluation of thermal cycler protocols. Preliminary results of the testing done indicate that the 16 locus multiplex kit provides robust and reliable results for characterizing single source samples routinely encountered in database (CODIS) operations.