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A STREAMLINED APPROACH TO VALIDATING NEW FORENSIC DNA TECHNOLOGIES

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As the demand for processing DNA evidence has continued to grow, so has the development of new technologies for DNA analysis. These factors can make it difficult for a crime laboratory to strike a balance between successful case workload management and the evaluation and implementation of new technologies. Laboratory Accreditation and Forensic DNA Analyst education require careful assessment and thorough validation studies to provide confidence in the DNA results ensuring the generation of robust, reliable and reproducible data. There are a variety of challenges the Forensic DNA laboratory faces when implementing a new methodology. A common challenge identified by laboratories is a lack of resources available for validation. Laboratories also point to the existence of diverse opinions with respect to validation protocols, sample numbers and definition of appropriate and effective experiments as a notable challenge. These variables have been shown to contribute to extensive validation studies that include unnecessary or excessive tests without the benefit of additional confidence. In addition, data management and analysis are cumbersome processes that are often manual operations or utilize a series of tools which analysts have developed on their own. This presentation will introduce attendees to a software tool developed in the Human Identity group at Applied Biosystems. The goal of the AB Validation Software is to help support, simplify and standardize validation studies while meeting SWGDAM/DAB recommendations. This is accomplished by incorporating the following functionality: ● Easy to use software program with a simple graphical user interface ● Experimental design tools and recommendations ● Integration of all portions of validation and workflow processes ● Calculation and data analysis tools ● Project and documentation management