A161 To Freeze or Not to Freeze?: Science-Based Guidance for Preserving Biological Evidence

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After attending this presentation, attendees will gain an understanding of research to date that provides guidance on how biological evidence can be best preserved. Further, this presentation will provide an overview of Technical Working Group on the Preservation of Biological Evidence activities to date and preliminary recommendations.

This presentation will impact the forensic science community by bringing awareness to issues in evidence storage and the solutions being proposed by the working group. The administrative burden of evidence management and storage has increased as advances in DNA technology enable better results with less material and more states enact post-conviction testing legislation. Recent DNA stability studies reveal conflicting justifications for biological evidence storage conditions. Crime labs and property and evidence rooms have different purposes, yet coordination is required among both in order to ensure that evidence is properly collected, analyzed, and preserved.

In August of 2010, the National Institute of Justice (NIJ) and the National Institute of Standards and Technology's Law Enforcement Standards Office (OLES) convened the first meeting of the *Technical Working Group on the Preservation of Biological Evidence Preservation.* The primary objective of the working group is to establish best practices, based in science, to reduce the premature destruction and degradation of biological evidence, thus ensuring its availability for future analysis. After conducting an analysis of the state of biological evidence storage, the group determined that a key barrier to adequate management of biological evidence is the lack of communication and standardized protocols between property and evidence clerks and forensic scientists.

Recent headlines have highlighted significant problems with the storage of potentially exculpatory biological evidence in property and evidence storage units across the country. Court orders for the location of evidence have demonstrated inadequacies in the packaging, storage, and tracking process of some evidence. Investigations into these inadequacies reveal underlying factors such as: capacity of the storage facility, laboratory backlog, materials available for packaging, geographic distance between the collecting and storage facility, and the selected tracking system. The disposition of evidence is a key consideration as the majority of evidence stored is of questionable probative value. Management of evidence in many long term storage locations is lacking, thus jurisdictions must develop standardized protocols to identify what evidence to keep, how to keep it, and for how long. This presentation will focus on describing ways that forensics scientists, in particular, can mitigate these issues.

The group's key deliverables will include a handbook outlining best practices and standardized protocols for property and evidence clerks, a report on legislative considerations, a report discussing current technological trends and possible applications, and a web-based clearinghouse for biological evidence handlers in the property rooms, courts, and law enforcement agencies.

DNA, Evidence, Storage

 ** Presenting Author*