## E6 Interpretation and Presentation of Forensic DNA Evidence

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The goal of this presentation is to provide a basic understanding of forensic DNA reports, terms, and data for the novice attorney.

This presentation will impact the forensic science community by providing a basic understanding of forensic DNA testing for the novice attorney so that testimony presented by DNA experts is valid, reliable, and understandable.

DNA evidence has changed over the years. While once requiring a stain the size of a quarter, DNA can now be detected in significantly smaller amounts. Further, with the proliferation of widespread training, law enforcement officials have become better educated about collecting evidence that could potentially yield viable DNA profiles. Due to this increased awareness of the types of evidentiary items that may produce usable DNA profiles and the increasing sensitivity of today's forensic DNA technology, DNA evidence is appearing in more and more cases.

What is the lawyer to do?

This presentation seeks to give the uninitiated attorney the basic tools necessary to start looking at DNA cases. It is no longer adequate as a prosecutor to rely on questions provided by the lab scientist. Defense attorneys cannot and should not simply use the questions asked by the last attorney to handle a DNA case in their office. Each case is unique, presenting its own set of facts and own special circumstances.

The first step is, of course, reading the report from the lab; however, that is merely a starting point, not the end point. Once the report has been read and understood, the lawyer must review the underlying data. This presentation will provide attendees with the information needed to competently review the work of the scientist, from identifying what samples were tested (and possible reasons why others were not) to comparing the results of questioned DNA evidence to the known samples. The information gleaned from lab notes and underlying data is also important and examples of what can be learned from case notes alone will be provided. The balance of the content of the DNA case file as well as other supporting and relevant laboratory documents (such as QA/QC records, equipment calibration logs and proficiency test results) will also be touched upon.

Once a lawyer has competently reviewed the file, decisions must be made about whether to hire an expert and what type of expert should be retained. Alternate theories of defense need to be considered. Plausible explanations of how DNA ended up in a crime scene sample must be explored by both the prosecution and the defense attorney.

Preparing to cross examine the other side's expert also requires a great deal of consideration and will be discussed. The final challenge,

presenting the DNA evidence effectively to the trier of fact, will also be touched upon. The use of slide shows, for example, can be an excellent way to draw the jury in. Learning how to convert scientific language into familiar, but still accurate language the jury will understand will also be discussed.

Additional types of specialized DNA testing protocols may be discussed to include Y STRs, Mitochondrial DNA, mini STRs, and SNPS.

**DNA, Lab Reports, Testimony**

 ** Presenting Author*