E2 Explaining DNA and DNA Results to Judges and Juries

Pamela A.W. King, JD, 400 South Broadway, Suite 15, Rochester, MN 55904*

After attending this presentation, attendees will have new ideas about how to present complex, often technical concepts in DNA litigation to judges and juries, using technology in the courtroom.

This presentation will impact the forensic science community by encouraging lawyers to explore new approaches to presenting important yet technical concepts to judges and juries. This will provide the fact finder with the skills necessary to be able to understand and apply scientific evidence in a particular case, thus raising the quality of DNA forensic testimony in the courtroom.

Assuring that judges and juries understand the scientific evidence presented to them, including an assessment of the weight that should be given to any particular piece of forensic evidence, is where lawyers play a crucial role in the forensic science community. In any given case the fact finder is asked to understand DNA evidence involving complex mixture analysis, different statistical analysis designed to assist the trier of fact in assigning weight to a particular DNA match, inclusion or exclusion, and consider different processes such as STR typing, YSTR, and Mitochondrial DNA analysis. They may be confronted with a multitude of issues surrounding sample collection, serology test results, machine malfunctions, etc. Many jurors and judges have little to no scientific background. Typically, their "knowledge" of forensic science is founded on what they see in pop culture and the media. As such jurors and to some degree judges must rely heavily on the ability of scientist and attorneys to explain these concepts in a manner that is simple and approachable.

The research that has been done in a multitude of forensic science disciplines looking at whether jurors understand and properly assign weight to particular types of evidence suggests that jurors in particular do not understand much of what the forensic scientist and the lawyers are trying to relay to them. Examination of exoneration cases also suggests that in some cases where the value of forensic evidence is being overstated or misrepresented by scientist or lawyers, juries haven't recognized these flaws or it may be the evidence was simply misunderstood by the finder of fact. Therefore, lawyers must attempt to find more effective tools to explain scientific concepts and present scientific evidence in the courtroom.

How can this material be presented in a more effective manner? What tools can be provided to the fact finder to allow them to properly assess the weight of this evidence? What role can the attorney play in helping judges and juries understand DNA evidence? This presentation will explore the particular challenges faced when DNA evidence is presented to the fact finder. It will then look at examples of how DNA evidence has been presented using tools such as visual aids to explain to the jurors how DNA typing is done and the challenges presented by things such as complex mixtures. These tools can be used by the prosecution as well as defense to assist the trier of fact in better understanding how DNA typing works, its limitations and what the forensic scientist is assessing in reaching their conclusions. This presentation will focus on specific cases and how the information was presented. The effectiveness of these tools has not been measured in any formal study. The suggestions are designed only to provide lawyers and forensic scientist with ideas and to encourage creativity on behalf of those presenting this evidence to assure the trier of fact has the tools necessary to effectively make a decision in a
particular case.

DNA, Expert Testimony, Juror Comprehension

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