



### E30 The Scientific Question vs. the Legal Burden: How Much DNA Testing Is Enough?

Ted R. Hunt, JD\*, Jackson County Courthouse, 415 E 12th St, Ft M, Kansas City, MO 64106

After attending this presentation, attendees will better understand the differences between the scientific question posed to DNA analysts and the legal burden faced by prosecuting attorneys, as these distinct concepts relate to different levels of proof required in forensic science and law.

This presentation will impact the forensic community by enhancing interdisciplinary understanding of the important distinction between these two concepts. This presentation will also facilitate a greater appreciation of the necessarily dynamic, rather than static nature of the “scientific question” posed to analysts by prosecutors who must respond to a moving target—an ever-evolving theory of defense—while attempting to satisfy the legal burden of proving the defendant’s guilt beyond a reasonable doubt.

Typically, the “scientific question” is initially posed to a DNA analyst by law enforcement. Answering that question consists of determining whether, to a reasonable degree of scientific certainty, a known biological standard can be associated with questioned crime scene stain—and if so, what amount of weight that conclusion deserves. In many cases, the scientific question is asked and answered before an arrest is made and provides the basis for the prosecutor’s decision to file charges.

However, an incriminating answer to this evidence specific question does not conclusively establish the prosecution’s theory. Rather, it supports an inference in favor of that theory. Accordingly, analysts must remember that a single, ostensibly strong DNA association to a criminal defendant is not necessarily sufficient to satisfy the prosecutor’s burden of proof in court. As the case proceeds toward trial and the defense begins to take shape, the original scientific question may evolve, may be reframed, or it may be necessary to answer altogether new scientific questions. Thus, additional DNA analysis may be necessary to shore up a case for prosecution, to rebut a defense attack, or respond to newly-developed facts and/or fluctuating legal theories.

From the analyst’s perspective, a prosecutor’s request for supplemental DNA analysis of one or more additional *probative* evidence stains may seem pointless, redundant, and unnecessary. This belief may stem from the analyst’s lack of intimate familiarity with the factual context of the originally tested evidence, and/or the litigants shifting legal issues and theories relative to that evidence. It may also arise from the analyst’s unfamiliarity with the prosecutor’s task—qualitatively different than answering the scientific question—of proving the case beyond a reasonable doubt to a unanimous 12 member jury. The potentially different perspectives of prosecutors and analysts regarding the need for supplemental DNA testing highlight the distinction between the “scientific question” and the “legal burden.”

The “legal burden” shouldered by American prosecutors is to prove each element of a criminal offense beyond a reasonable doubt. The prosecutor’s theory is informed by the credible facts in the case and the admissible incriminating evidence. In many cases, the single most incriminating fact may be the DNA test results offered by the prosecution’s expert witness.

However, it must be remembered that the defendant also has a theory of the case. Furthermore, the defense is never legally obligated to disclose or declare its theory to the prosecution. That theory may ultimately be that the prosecutor has failed to meet his or her burden of proof, may incorporate and utilize different and additional facts and evidence, or may call for a contrary and competing interpretation of the same facts.

The ability of the defense to constantly update its theory in response to the government’s case results from legally recognized distinctions between the parties. Unlike the prosecution, the defense has no burden of proof; must *never* declare his/her trial strategy at any point in time; is entitled to categorical acquisition, review, and use of the prosecution’s discovery; and may largely ignore the same discovery rules and deadlines that the prosecutor is obligated to follow. In some cases, the result will be a defense that resembles a moving target—constantly evolving and updating in reaction to the prosecution’s case. In this way, the defense will attempt to accommodate, avoid, or refute the prosecution’s DNA evidence with whatever strategy counsel deems most plausible at *any* given point in time.

Because of this legal asymmetry between the parties, corroborative (sometimes called convergent) evidence is essential to any prosecution. Corroborative evidence may be defined as that which is supplementary to evidence already given and that tends to strengthen or confirm it.<sup>1</sup> In those cases in which DNA provides the sole or primary link between a suspect and a crime, supplemental DNA analysis of one or more available *probative* evidence samples may provide essential corroboration for the prosecution’s existing DNA evidence. Such testing can also simultaneously diffuse defense attacks against the contextual significance of the evidence, its chain of custody, the analyst’s skills and experience, the lab’s evidence handling procedures, testing protocols, and the interpretation of the results. In sum, targeted supplemental DNA analysis can serve to greatly diminish the courtroom plausibility of various defense attacks against a single incriminating DNA result, while simultaneously increasing the chances of a just and successful prosecution.

It is recognized that laboratories may fear that the prosecution’s need for corroborative DNA evidence will present a number of practical and logistical challenges. Among these are unpredictable rush jobs, disrupted work flow, increased pressure placed on already limited resources, and greater risk of error due to artificially imposed



## Jurisprudence Section - 2013

---

deadlines. These fears, however, should not cause labs to refuse to test supplemental *probative* samples that may corroborate existing incriminating DNA results.

One solution to this problem – either wholly absent or extremely rare in many jurisdictions is the consistent interdisciplinary communication and collaboration between prosecutors, law enforcement, and laboratory officials. Forensic case coordination, or “triage” meetings, should take place between representatives of these agencies before or immediately after criminal charges are filed in cases whose success will heavily depend upon DNA testing and analysis. The main purpose of these interdisciplinary meetings should be to collectively discuss the facts of the case, potential legal issues, various possible theories of the prosecution and defense, and to make informed decisions about which *probative* items of evidence should be tested. Such meetings also provide a forum for prosecutors and lab officials to share their potentially different perspectives on the need for supplemental DNA testing, and allow them to justify and defend their positions at a point in time in which such testing remains a realistic possibility.

In addition, follow-up interdisciplinary case meetings or communications should take place as needed. During these meetings, the prosecutor should update laboratory officials on the current status of legal issues and evolving theories of both the prosecution and defense. Participating officials should also collectively decide whether any additional remaining *probative* items of evidence should be analyzed to further strengthen the prosecution’s case, or to rebut a potential attack from an unfolding defense theory. In this way, the “scientific question” will remain relevant by frequent updating and refinement based on the current legal and factual exigencies of each case.

**Reference:**

<sup>1</sup> Black’s Law Dictionary 182 (5<sup>th</sup> ed. 1983).

**Scientific Question, Legal Burden, DNA Analysis**