

Why New Forensic Science Can Take Years to Reach a Courtroom References

Legal & Judicial Standards

Federal Rules of Evidence, 28 U.S.C. § 702 (2011).

Context: Dictates the modern standards regulating testimony by expert witnesses in federal courtrooms, encoding the requirements for structured reliability.

Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993).

<https://www.oyez.org/cases/1992/92-102>

Context: The landmark Supreme Court ruling establishing the standard where judges serve as scientific gatekeepers, verifying error rates and structural validation methods before allowing scientific evidence to reach a jury.

Frye v. United States, 293 F. 1013 (D.C. Cir. 1923).

<https://casetext.com/case/frye-v-united-states-7>

Context: The foundational case establishing the "general acceptance" metric for novel scientific procedures entering the justice system.

Forensic DNA Development & History

Federal Bureau of Investigation. (1998). *The Combined DNA Index System (CODIS) Program*. U.S. Department of Justice. <https://www.fbi.gov/services/laboratory/biometric-analysis/codis>

Context: Historical documentation detailing the baseline rollout of CODIS and the standard implementation of the initial 13 core Short Tandem Repeat (STR) loci across US crime labs.

National Research Council. (1996). *The evaluation of forensic DNA evidence: An update*. National Academies Press. <https://doi.org/10.17226/5141>

Context: The seminal scientific evaluation confirming the statistical population genetics and multi-locus profile frameworks needed to clear general legal reliability thresholds for STRs.

Laboratory Systems & Institutional Operations

National Institute of Justice. (2021). *Forensic sciences capacity enhancement and backlog reduction (CEBR) program*. Office of Justice Programs. U.S. Department of Justice.
<https://nij.ojp.gov/funding/forensic-sciences-capacity-enhancement-and-backlog-reduction>

Context: Underlines the public-sector funding model, throughput mandates, and systemic backlog restrictions built into state and county crime laboratories.