



E47 Report on a Recent *Frye* Challenge of Bitemark Evidence in New York

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The goal of this presentation is to discuss a recent bitemark case and through that discussion offer broader strategies for challenging the admissibility of bitemark evidence. More specifically, the presentation will discuss in detail a recent *Frye* challenge to the admissibility of bitemark evidence, focusing on the defense and prosecution litigation strategies in the wake of the National Academy of Sciences (NAS) Report, "*Strengthening Forensic Science in the United States: A Path Forward*."

This presentation will impact the forensic science community by demonstrating how the exonerations of numerous innocent defendants convicted in part based on bitemark evidence and the release of the NAS Report highlights that forensic odontology has not been validated, as well as the danger of admitting into evidence unvalidated disciplines where life and liberty are at stake. The ability of forensic dentists to consistently and with any degree of accuracy associate an individual's dentition with a bitemark recorded on human skin has never been scientifically validated. Recent research has further eroded the scientific community's confidence in bite comparison as a forensic discipline.

The NAS Report was critical of nearly all pattern and impression evidence, but was particularly critical of bitemark evidence, concluding that there is "no evidence of an existing scientific basis for identifying an individual to the exclusion of all others" by using bitemark comparisons, because there is "a lack of valid evidence to support many of the assumptions made by forensic dentists during bitemark comparisons."¹ The fundamental assumptions – that human skin is a reliable registration material for bitemarks and that the human dentition is unique – have been challenged in research published since the NAS Report.

The pre-trial litigation in a homicide case in New York City presents a unique learning opportunity for judges, prosecutors and lawyers who may be presented with bitemark comparison evidence in a criminal case. Although the defendant was excluded from a DNA swab taken from the bitemark at issue, the opinion of the initial prosecution witness, in his forensic report and evaluation prior to the DNA analysis, was that the bitemark was "caused by the dentition of [the accused]." The prosecution expert in the pre-trial hearing (a different expert), whose testimony related only to the general admissibility of bitemark evidence, concluded that the NAS Report "cherry picked" the research it relied upon and that well-trained forensic odontologists are capable of accurately and reliably associating a known dentition with a bitemark injury. In contrast, the defense witness testimony relied on the results of scientific studies published in peer reviewed journals. These studies, the first post-NAS Report efforts to determine whether or not bitemark associations can be validated as a scientific discipline, have cast more doubt about its validity.

The Innocence Project is actively litigating several cases involving bitemark evidence and the newly created Strategic Litigation Unit is focused on, among other forensic disciplines, forensic odontology. This presentation will be an opportunity to learn and discuss best practices for challenging such evidence.

Reference:

- ¹ National Research Council of the National Academies, *Strengthening Forensic Science in the United States: A Path Forward*. Washington, DC: National Academies Press, 2009, p. 176.

Forensic Odontology, *Frye/Daubert*, Bitemark Comparison