E48 Does Bitemark Evidence Meet Modern Evidentiary Reliability Standards? A Subject Expert Panel Discussion

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After attending this presentation, attendees will be educated on the latest scientific basis and legal admissability status of bitemark evidence.

This presentation will impact the forensic science community by bringing together the most knowlegable experts in the field to debate a subject that is of significant importance to the American criminal justice system.

The question posed to the bitemark subject experts is, “Does bitemark evidence meet or exceed threshold legal admissibility standards?” This presentation will answer questions related to bitemark reliability from the audience.

The admissibility of bitemark evidence historically has been based on courtroom precedence and a half-century acceptance in the underlying fundamental principles of the technique. Over the past decade wrongful convictions based on bitemark evidence have called into question the fundamental scientific basis of bitemark identification methods.

The standard for admission of scientific expert testimony differs from court to court and from state to state. Generally courts are guided by Rule 702 of the Federal Rules of Evidence and two main cases, *Frye v. United States* and *Daubert v. Merrell Dow Pharmaceuticals, Inc.* The *Frye* test for admissibility requires the scientific principle being proffered as evidence “to have gained general acceptance in the particular field in which it belongs.” If the trial court determines that a technique has gained general acceptance in its field, then the technique is deemed reliable enough to be admitted at trial. In 1993, the United States Supreme court in the *Daubert* case held that Rule 702 of the Federal Rules of Evidence changed the *Frye* test. Rule 702 states in part, “*If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise . . . .” Daubert* retained *Frye*’s general acceptance principle for admission, it also stated that scientific evidence must be both relevant and reliable. The *Daubert* court went on to outline factors relevant to the admissibility of scientific expert testimony to aid trial court judges, including: (1) the theory or technique must be able to be, and have been, tested; (2) it must have been “subjected to peer review and publication;” (3) the known or possible error rate of the scientific technique must be taken into consideration; (4) the court should take into account the “relevant scientific community” and a determination of the degree to which the theory or technique in question is accepted in that community; and (5) the focus is on the principles and methodology behind the technique, not necessarily on the conclusions generated.

The guidelines of the American Board of Forensic Odontology (ABFO) permit an expert member to render conclusions expressing near certainty – they could conclude that a bitemark matches a criminal defendant to a “reasonable medical certainty” and “high degree of certainty” and/or “a reasonable medical and dental certainty, did inflict the injury.” This language appears to mean, in certain cases, a virtual certainty; no reasonable or practical possibility that someone else did it. Does science exist for what observations and analysis could permit an expert to draw such conclusions? The guidelines added that experts may not convey “unconditional certainty;” however, they may express “reasonable medical certainty,” and noted that it was acceptable to state that there is “no doubt in my mind” or “in my opinion, the suspect is the biter” when such statements are prompted in testimony. Many expert conclusions that go beyond the ABFO guildline are still allowed, such as that a person “beyond a reasonable doubt” or “99 percent certainty” the suspect made the bite.

Are the ABFO guidelines faulty? Is the underlying method of this discipline reliable?

Bitemark, Frye, *Daubert*

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