



## Jurisprudence Section - 2014

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### **F4 Just in the Lick of Time: A Case Presentation on the Importance of Salivary Secretion Swabbing Following an Acute Sexual Assault**

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After attending this presentation, attendees will gain an understanding about the significance of swabbing salivary secretions in a timely manner following a case of acute sexual assault in regard to yielding amylase and possible DNA.

This presentation will impact the forensic science community by providing a case study and evidence-based literature regarding the DNA yield from the swabbing of salivary secretions in reports of sexual assault where the victim was either bitten or licked based on examination and/or victim report. This presentation will also strive to impact the forensic science community by broadening the understanding of the importance of detecting salivary secretions by the use of an alternate light source in addition to victim reporting in order to collect salivary amylase in a timely manner. The impact on the forensic odontology section will be to emphasize and enable a better appreciation of the outcomes in sexual assault criminal cases, which involve bitemark evidence. These cases can be better served by evidence with objective, quantitative data such as the presence of salivary amylase and DNA, rather than relying entirely on the subjective, qualitative data, such as a bitemark comparison analysis.

In instances of sexual assaults, the exchange of fluids can be seminal and/or salivary. According to the Texas Attorney General's office, many offenders have sexual dysfunction and do not ejaculate during the sexual assault. In a review of the literature, studies have indicated that there is no ejaculation in over 50% of the sexual assault cases that are reported. Also taken into account is that many offenders use prophylaxis, have low sperm counts, or ejaculate elsewhere than on the victim's body. In cases where there is the presence of a bitemark and/or salivary secretions by either victim report or are visualized by the use of an alternate light source, it has been shown through case reviews that when properly collected in a timely manner, the yield of DNA through salivary amylase can become important evidence in cases of acute sexual assault.

This presentation will provide a case study as an example involving a sexual assault that was only oral in nature. When utilizing the American Board of Forensic Odontology's double-swab salivary secretion collection method within three hours of the assault, the evidence showed the presence of salivary amylase in two of the four collection sites which then further yielded DNA, assisting in the successful prosecution of the offender.

In conclusion, many times the successful prosecutions lie entirely on the evidence and it is imperative that forensic odontologists advance their training and are encouraged to conduct research and obtain statistics in evidence that is more objective and quantitative as opposed to subjective and qualitative.

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#### **Salivary Amylase, DNA, Sexual Assault**