



## G15 Bitemarks in Wrongful Convictions in the United States

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After attending this presentation, attendees will have acquired information regarding the role that bitemarks have played in wrongful convictions in the United States judicial system in the past 40 years.

This presentation will impact the forensic science community by demonstrating the shortcomings of the judicial system, the necessity for basic education, continuing education, certification, recertification, proficiency testing, and the necessity of funding research.

The need for funding research was emphasized in the 2009 National Academy of Sciences (NAS) Report for improving the forensic science disciplines and thus, hypothetically, reducing wrongful convictions.<sup>1</sup> Only one bitemark research project has been funded in the eight-year interval by the National Institute of Justice (NIJ), a branch of the United States Department of Justice, despite numerous applications for funding.<sup>2</sup>

The Texas Forensic Science Commission report investigated a complaint lodged by the Innocence Project.<sup>3</sup> The latter asked the Commission “to investigate and report on ‘the integrity and reliability’ of bitemark evidence as used in criminal proceedings.”

The President’s Council of Advisors on Science and Technology (PCAST) Final Report and Addendum was widely criticized by different organizations and boards dealing with forensics (the American Board of Forensic Odontology, the Society of Crime Laboratory Directors, the International Association for Identification, etc.), law enforcement (the Federal Bureau of Investigation (FBI), the National Association of Attorney Generals, etc.), prosecutors (the National District Attorneys Association, etc.), as well as scientists.<sup>4,5</sup> One such scathing criticism from a scientist states that: “... the PCAST Report (1) is **not** scientifically sound, (2) is **not** based on data, (3) is **not** well-documented, (4) misapplies statistics, (5) is full of inconsistencies, and (6) does **not** provide helpful guidance to obtain valid results in forensic analyses.”<sup>6</sup> These comments underline the necessity for balance between pure science and the practical application of a discipline.

The system of justice in North America is based on the premise that the accused is innocent until proven guilty and this burden of proof rests upon the prosecution. The prosecution’s failure to demonstrate beyond reasonable doubt plays in favor of the accused. Ultimately, a judge or a jury decides on the guilt or the innocence of the accused. The principal adversarial actors on this stage are the prosecutorial and the defense attorneys. They are the ones that ultimately orchestrate the unfolding play in court. Their success or failure largely contributes to the outcome. All other interveners contribute minor roles to the courtroom stage.

This presentation also outlines the role that inadequate legal defense has played in wrongful conviction in bitemark cases, the failure to have or to use an expert witness at trial, and the use of rogue forensic experts.

In conclusion, wrongful convictions are the scourge of a North American judicial system. There is no single factor responsible for this dilemma.

### Reference(s):

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2. L. Thomas Johnson, Thomas W. Radmer, Dean Jeutter, Gary L. Stafford, Joseph Thulin, Thomas Wirtz, George Corliss, Kwang Woo Ahn, Alexis Visotky, Ronald L. Groffy. *Replication of Known Dental Characteristics in Porcine Skin: Emerging Technologies for the Imaging Specialist*. NIJ Award 2010-DN-BX-K176. 2010.
3. The Texas Forensic Science Commission. Forensic Bitemark Comparison Complaint Filed by National Innocence Project on Behalf of Steven Mark Chaney – Final Report. April 12, 2016.
4. The President’s Council of Advisors on Science and Technology (PCAST) Final Report, Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods. September 2016.
5. The President’s Council of Advisors on Science and Technology (PCAST) Final Report, Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods, Addendum Report. January 6, 2017.
6. Bruce Budowle, Director for the Center for Human Identification, University of North Texas Health Science Center. June 17, 2017.

### Bitemark, Expert Witness, Wrongful Conviction