INNOCENCE PROJECT

DESCRIPTION OF BITE MARK EXONERATIONS

1. **Keith Allen Harward:** Keith Harward was convicted of the September 1982 murder of a man and the rape of his wife. The assailant, who was dressed as a sailor, bit the rape victim's legs multiple times during the commission of the rape. Because of the assailant's uniform, the investigation focused on the sailors aboard a Navy ship dry-docked near the victims' Newport News, Virginia, home. Dentists aboard the ship ran visual screens of the dental records and teeth of between 1,000 and 3,000 officers aboard the ship; though Harward's dentition was initially highlighted for additional screening, a forensic dentist later excluded Harward as the source of the bites. The crime went unsolved for six months, until detectives were notified that Harward was accused of biting his then-girlfriend in a dispute. The Commonwealth then re-submitted wax impressions and dental molds of Harward's dentition to two ABFO board-certified Diplomates, Drs. Lowell Levine and Alvin Kagey, who both concluded that Harward was the source of bite marks on the rape victim. Although the naval and local dentists who conducted the initial screenings had excluded Harward as the source of the bites, in the wake of the ABFO Diplomates' identifications they both changed their opinions. Harward's defense attorneys also sought opinions from two additional forensic dentists prior to his trials, but those experts also concluded that Harward inflicted the bites; in total, six forensic dentists falsely identified Harward as the biter.

   At Harward's second trial, Dr. Levine testified that there was "a very, very, very high degree or probability"—so high that it would be a "[p]ractical impossibility"—that anyone other than Harward inflicted the bites on the victim. Similarly, Dr. Kagey testified that Harward was the biter "with all medical certainty" and "that there is just not anyone else that would have this unique dentition." Post-conviction DNA evidence, however, excluded Harward as the source of all biological evidence collected from the victim and the crime scene and identified the person responsible, a sailor who was stationed on Harward's ship at the time of the crime. That man died in an Ohio prison in 2006 while serving time for abduction. On April 7, 2016, Harward was declared innocent by the Virginia Supreme Court, and he walked out of prison the next day, following 34 years of wrongful conviction.[1]

2. **Robert Lee Stinson:** Robert Lee Stinson served over 23 years in a Wisconsin prison for the brutal rape and murder of 63-year-old victim Ione Cychosz. The

[1] The Innocence Project, *Keith Allen Harward*, http://www.innocenceproject.org/cases/keith-allen-harward/.

only physical evidence against Stinson at his 1985 trial was the bite mark testimony of two board-certified ABFO Diplomates, Drs. Lowell Thomas Johnson and Raymond Rawson. Dr. Johnson concluded that the bite marks "had to have been made by teeth identical" to Stinson's and claimed that there was "no margin for error" in his conclusion. Dr. Rawson, the chairman of the Bite Mark Standards Committee of the ABFO, testified that the bite mark evidence was "high quality" and "overwhelming." Both experts testified "to a reasonable degree of scientific certainty" that the bite marks on the victim had been inflicted at or near the time of death, and that Stinson was the only person who could have inflicted the wounds. After examining Dr. Johnson's workup, Dr. Rawson stated that the methods Dr. Johnson used in gathering the evidence complied with the "standards of the American Board of Forensic Odontology."

The Wisconsin Innocence Project accepted Stinson's case in 2005 and sought DNA testing of saliva and bloodstains on the victim's sweater, which ultimately excluded Stinson. On January 30, 2009, Stinson, then 44, was freed and his conviction was vacated.[2]

3. **Gerard Richardson:** On December 17, 2013, Gerard Richardson was exonerated after post-conviction DNA testing proved his innocence in a 1994 murder case. He spent nearly 20 years in prison for a crime he did not commit. At Richardson's 1995 trial, ABFO board-certified Diplomate Dr. Ira Titunik testified that a bite mark found on the victim's back "was made by Gerard Richardson . . . there was no question in my mind," and the prosecutor argued that the bite mark was indisputably made by Richardson: "Mr. Richardson, in effect, left a calling card. . . It's as if he left a note that said, 'I was here,' and signed because it the mark on her back was made by no one else's teeth." There was no other physical evidence tying Richardson to the crime. He was sentenced to 30 years in prison without the possibility of parole. More than 19 years after Monica Reyes was murdered, new evidence demonstrated that Richardson was innocent.[3]

4. **Willie Jackson:** On May 26, 2006, Willie Jackson was exonerated after post-conviction DNA testing proved his innocence in a 1986 sexual assault case. He had spent 17 years in prison for a crime he did not commit. At Jackson's trial, Dr. Robert Barsley, past president of the American Board of Forensic Odontology (ABFO), told the jury that the bite marks on the victim matched Jackson: "My conclusion is that Mr. Jackson is the person who bit this lady." Ultimately, DNA evidence showed that it was Willie Jackson's brother, Milton Jackson, who attacked and raped the victim.[4]

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[2] The Innocence Project, *Robert Lee Stinson*, http://www.innocenceproject.org/cases/robert-lee- stinson/; s*ee also State v. Stinson*, 134 Wis. 2d 224, 397 N.W.2d 136 (Ct. App. 1986).

[3] The Innocence Project, *Gerard Richardson*, http://www.innocenceproject.org/cases/gerard- richardson/; *see also* http://www.innocenceproject.org/docs/Richardson_Final_Motion_to_Vacate_091713.pdf.

[4] The Innocence Project, *Willie Jackson*, http://www.innocenceproject.org/cases/willie- jackson/; *see also Jackson v. Day*, No. Civ. A. 95-1224, 1996 WL 225021, at *1 (E.D. La. May 2, 1996), *rev'd*, 121 F.3d 705

5. **Roy Brown:** In January 2007, Roy Brown was exonerated of stabbing and strangling Sabina Kulakowski after spending 15 years in prison. He was convicted of her murder in January 1992 based on bite mark evidence that was the centerpiece of the prosecution's case against Brown. Kulakowski's body had been discovered with multiple bite marks on her back, arm, and thigh, all of which board-certified ABFO Diplomate Dr. Edward Mofson[5] claimed were a match to Brown's teeth. Mofson testified to a "reasonable degree of dental certainty" that Brown's dentition was "entirely consistent" and "completely consistent" with all of the bite marks, noting that the bite marks depicted the absence of the same two teeth Brown was missing.

   Fifteen years after the conviction, however, DNA testing performed on saliva stains left by the perpetrator excluded Brown and matched another suspect, Barry Bench. Nevertheless, citing the prosecution's bite mark evidence at the original trial, which the jury asked to review during deliberations, the judge in the case initially refused to release Brown. Ultimately, in January 2007, the district attorney acknowledged Brown's innocence, and he was exonerated after spending 15 years in prison for a murder he did not commit.[6]

6. **Ray Krone:** On December 31, 1991, Ray Krone was arrested and charged with the murder, kidnapping, and sexual assault of a woman who worked at a bar he frequented. Police had a Styrofoam impression made of Krone's teeth for comparison to bite marks found on the victim's body and, thereafter, he became known in the media as the "Snaggle Tooth Killer" due to his crooked teeth. Dr. Raymond Rawson, a board-certified ABFO Diplomate, testified that the bite marks found on the victim's body matched Krone's teeth. Based on this testimony, Krone was convicted of murder and kidnapping and sentenced to death.

   In 1996, Krone won a new trial on appeal, but was convicted again based mainly on the state's supposed expert bite mark testimony. This time, however, the judge sentenced him to life in prison, citing doubts about whether or not Krone was the true killer. It was not until 2002, after Krone had served more than 10 years in prison, that DNA testing proved his innocence.[7]

(5th Cir. 1997), and Dr. Barsley's 1989 trial court testimony, http://www.law.virginia.edu/pdf/faculty/garrett/innocence/jackson.pdf.

[5] All representations that the dentists at issue in this appendix were "board-certified ABFO Diplomates" are based on the *American Board of Forensic Odontology Diplomate Information, Updated 8/2017*, http://abfo.org/wp-content/uploads/2017/05/ABFO-Diplomate-Information-revised-August-2017.pdf.

[6] Fernando Santos, *In Quest for a Killer, an Inmate Finds Vindication*, New York Times, Dec. 21, 2006, http://www.nytimes.com/2006/12/21/nyregion/21brown.html?pagewanted=all&_r=1. *See also* The Innocence Project, *Roy Brown*, http://www.innocenceproject.org/cases/roy-brown/; Brandon L. Garrett, *Convicting the Innocent*: *Where Criminal Prosecutions Go Wrong,* 108-09 (Harvard University Press 2011); Dr. Mofson's 1992 trial court testimony, http://www.law.virginia.edu/ pdf/faculty/garrett/innocence/brown1.pdf; David Lohr, *Quest for Freedom: The True Story of Roy Brown*, http://www.trutv.com/library/crime/criminal_mind/forensics/ff311_roy_brown/5.html.

[7] The Innocence Project, *Ray Krone*, http://www.innocenceproject.org/cases/ray-krone/.

7. **Calvin Washington &**
8. **Joe Sidney Williams:** Calvin Washington was convicted of capital murder in 1987 after a woman was found beaten, raped, and murdered in Waco, Texas. It was alleged that Washington and Williams murdered and sexually assaulted the victim in the course of committing a burglary. A forensic dentist and former president of the American Academy of Forensic Sciences, Dr. Homer Campbell, testified that a bite mark found on the victim was "consistent with" Williams' dentition. While Campbell excluded Washington as the source of the bite mark, his bite mark testimony about Williams (which was given at Washington's trial) tied Washington to the crime.

   After serving more than 13 years of his sentence, Washington was finally exonerated in 2000 when DNA testing showed that blood on a shirt found in Washington's home did not come from the victim, as previously asserted; testing conducted a year later pointed to another man as the perpetrator.[8] Prior to Washington's exoneration, the Texas Court of Criminal Appeals had set aside Williams' conviction in 1992, and the charges against Williams were dismissed on June 30, 1993.

9. **James O'Donnell**: James O'Donnell was convicted in 1998 of attempted sodomy and second-degree assault. Board-certified ABFO Diplomate Dr. Harvey Silverstein opined that a bite mark on the victim's hand was consistent with O'Donnell's dentition. Based on an eyewitness' identification and the bite mark evidence, and despite testimony from O'Donnell's wife and son that he had been at home with them when the crime occurred, the jury convicted O'Donnell. He was sentenced to three-and-a-half to seven years in prison.

   In 2000, after DNA samples from a rape kit excluded O'Donnell as the source of the semen found on the victim, his conviction was formally vacated.[9]

10. **Levon Brooks:** Levon Brooks spent 16 years in prison for the rape and murder of a three-year-old girl that he did not commit. Forensic dentist Dr. Michael West claimed that the marks on the victim's body were human bite marks and he testified at Brooks' trial that, of 13 suspects whose dentitions he had compared to the wounds on the victim's body, Brooks' teeth "matched" the marks on the victim. As he explained, "it could be no one but Levon Brooks that bit this girl's arm." Based on this testimony, Brooks was convicted of capital murder and sentenced to life in prison.

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[8] The Innocence Project, *Calvin Washington*, http://www.innocenceproject.org/cases/calvin- washington/. *See also* Michael Hall, *The Exonerated*, Texas Monthly, Nov. 2008, http://www.texasmonthly.com/articles/the-exonerated/.

[9] The Innocence Project, *News: Cases Where DNA Revealed That Bite Mark Analysis Led to Wrongful Arrests and Convictions*, http://www.innocenceproject.org/cases-where-dna-revealed-that-bite-mark-analysis-led-to-wrongful-arrests-and-convictions/. *See also* Dr. Silverstein's 1998 trial court testimony, http://www.law.virginia.edu/pdf/faculty/garrett/innocence/odonnell.pdf.

In 2001, DNA testing and a subsequent confession revealed that Justin Albert Johnson committed the murder. Johnson had been one of the 12 other suspects whose dental impressions Dr. West had determined did not match the bite marks on the victim's body. Following Johnson's confession, Brooks was freed on February 15, 2008.[10]

11. **Kennedy Brewer:** In 1992, Kennedy Brewer was arrested in Mississippi and accused of killing his girlfriend's three-year-old daughter. The medical examiner who conducted the autopsy, Dr. Steven Hayne, testified that he had found several marks on the victim's body that he believed to be bite marks. Hayne called in Dr. Michael West to analyze the marks, and Dr. West concluded that 19 marks found on the victim's body were "indeed and without a doubt" inflicted by Brewer. Brewer was convicted of capital murder and sexual battery on March 24, 1995, and sentenced to death. His conviction was based almost entirely on the bite mark evidence.

    In 2001, DNA tests proved that Justin Albert Johnson, not Kennedy Brewer, committed the crime; Johnson was the same individual responsible for murdering the child in the Levon Brooks case. As a result of the DNA testing, Brewer's conviction was overturned. He had served seven years on death row and one year in jail awaiting trial.[11]

12. **Bennie Starks:** Bennie Starks was convicted of raping and assaulting a 69-year-old woman in 1986, based, in part, on testimony by two forensic dentists, Drs. Russell Schneider and Carl Hagstrom. Both dentists testified that a bite mark on the victim's shoulder matched Starks' dentition. Starks spent 20 years in prison before an appeals court ordered a new trial, after DNA testing of semen recovered from the victim excluded Starks. On January 7, 2013, the state's attorney dismissed all charges against Starks.[12]

13. **Michael Cristini &**
14. **Jeffrey Moldowan:** In 1991, Michael Cristini and Jeffrey Moldowan were convicted of the rape, kidnapping, and attempted murder of Moldowan's ex-girlfriend, Maureen Fournier. At trial, two board-certified ABFO Diplomates, Drs. Allan Warnick and Pamela Hammel, testified that bite marks on the victim's body came from both defendants to the exclusion of all others. Both men were convicted.

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[10] The Innocence Project, *Levon Brooks*, http://www.innocenceproject.org/cases/levon-brooks/.
[11] The Innocence Project, *Kennedy Brewer*, http://www.innocenceproject.org/cases/kennedy- brewer/.
[12] The Innocence Project, *Bennie Starks Exonerated After 25 Year Struggle to Clear His Name*, http://www.innocenceproject.org/bennie-starks-exonerated-after-25-year-struggle-to-clear-his-name/. *See also* Lisa Black, *Exonerated Man's Ordeal Ends: 'I Am Overwhelmed with Joy',* Chicago Tribune, Jan. 7, 2013, http://articles.chicagotribune.com/2013-01-07/news/chi-bennie-starks-lake-county-charges-dropped_1_bennie-starks-mike-nerheim-ordeal-ends; Donna Domino, *Dentists Sue Over Bite Mark Testimony*, http://www.drbicuspid.com/index.aspx?sec=nws&sub=rad&pag=dis&ItemID =309572.

Cristini was sentenced to 44 to 60 years, and Moldowan to 60 to 90 years. After the conviction, an investigator hired by the Moldowan family found a witness who said he had seen four black men standing around a naked woman at the scene of the crime. The witness' story contradicted Fournier's, as Cristini and Moldowan are both white. Dr. Hammel then recanted her testimony, saying that she had been uncertain that either defendant had in fact been responsible for the bite marks. According to Dr. Hammel, she had agreed to testify only when Dr. Warnick had assured her that a third odontologist had also confirmed that the bite marks could be matched to Cristini and Moldowan to the exclusion of all others.

On October 20, 2003, the Macomb County Circuit Court granted Cristini a new trial, citing the new eyewitness evidence, Dr. Hammel's recantation, and stronger alibi evidence. Cristini was acquitted by a jury on April 8, 2004, after having served 13 years in prison. Later, Cristini filed wrongful conviction lawsuits against the City of Warren, Macomb County, and Dr. Warnick. The suit against Dr. Warnick was settled quickly for an undisclosed amount.

In 2002, the Michigan Supreme Court reversed Moldowan's conviction. On retrial, in February 2003, Moldowan was acquitted of all charges and released, having served nearly twelve years in prison. Moldowan's lawsuit was settled for $2.8 million in 2011.[13]

15. **Anthony Keko:** Anthony Keko was convicted in 1994 for the 1991 murder of his estranged wife, Louise Keko. Dr. Michael West testified that a bite mark on the victim's shoulder matched Anthony Keko's dentition. Dr. West's testimony was the only direct evidence linking Keko to the crime, and prosecutors conceded that without the bite mark evidence there was no case. Keko was found guilty and sentenced to life in prison. In December 1994, however, the trial judge became aware of previously undisclosed disciplinary proceedings against Dr. West. The judge began to express doubts regarding West's forensic abilities and ultimately reversed Keko's conviction.[14]

16. **Harold Hill &**
17. **Dan Young, Jr.:** Harold Hill was 16 when he and his codefendant, Dan Young, Jr., were convicted of the rape and murder of 39-year-old Kathy Morgan in 1990. Both

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[13] *People v. Moldowan*, 466 Mich. 862, 643 N.W.2d 570 (2002); *Moldowan v. City of Warren*, 578 F.3d 351 (6th Cir. 2009); Ed White, *Warren Settles Rape Case Lawsuit for $2.8 Million – Falsely Imprisoned Man Sued for Violation of His Civil Rights*, Detroit Legal News, Oct. 19, 2011, http://www.legalnews.com/detroit/1109085; Jameson Cook, *Michael Cristini Wants Bigger Settlement than Jeffrey Moldowan*, Macomb Daily, Dec. 25, 2012, http://www.macombdaily.com/article/20121225/NEWS01/121229769/michael-cristini-wants-bigger-settlement-than-jeffrey-moldowan#full_story; Michael S. Perry, *Exoneration Case Detail*: *Michael Cristini*, National Registry of Exonerations, https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=3133; Hans Sherrer, *Prosecutor Indicted For Bribery After Two Men Exonerated of Kidnapping and Rape*, Justice: Denied, 2005, at 10, http://www.justicedenied.org/issue/issue_27/ Moldowan_cristini_exonerated.html.

[14] *A Dentist Takes The Stand*, Newsweek, Aug. 19, 2001, https://www.newsweek.com/dentist-takes-stand-151357; Mark Hansen, *Out of the Blue*, ABA J., Feb. 1996, http://www.abajournal.com/magazine/article/out_of_the_blue/print/.

men would end up spending 15 years in prison for a crime they did not commit. At trial, board-certified ABFO Diplomate Dr. John Kenney linked a bruise and a bite mark on the victim's body to Hill and Young. Both were found guilty and sentenced to life in prison without parole. It wasn't until 2004 that DNA tests excluded both Hill and Young as the source of DNA evidence found on the victim. In 2005, prosecutors finally dismissed the charges against both men. Dr. Kenney later said that the prosecution pushed him to exaggerate his results.[15]

18. **Greg Wilhoit:** Greg Wilhoit's wife, Kathy, was murdered in Tulsa, Oklahoma, in June 1985. Wilhoit was left to raise his two daughters—a 4-month-old and a 1-year-old. A year later, he was arrested and charged with the murder based on the opinions of two forensic odontologists, Drs. Richard Glass and Keith Montgomery, that his dentition matched a bite mark on his wife's body. Wilhoit was found guilty and sentenced to death.

    During his appeal, other forensic odontologists examined the bite mark evidence and independently concluded that the bite mark could not be matched to Wilhoit. He was released on bail for two years, and when a retrial was finally held in 1993, the judge issued a directed innocence verdict. In total, Wilhoit dealt with this tragedy for 8 years, fighting a case built entirely on bite mark analysis. Wilhoit's story was documented by John Grisham in "The Innocent Man."[16]

19. **Crystal Weimer:** A Fayette County, Pennsylvania, jury convicted Crystal Weimer of third-degree murder in 2006 for the beating death of Curtis Haith. Apart from a jailhouse informant, the only evidence placing Weimer at the scene was the testimony of forensic odontologist Dr. Constantine Karazulas, who concluded that a bite mark on the victim's hand was a "match" with Weimar's dentition. After the National Academy of Science's landmark 2009 report, *Strengthening Forensic Science in the United States: A Path Forward*, criticized the lack of scientific support for bite mark analysis, Dr. Karazulas undertook an independent review of the "science" of bite mark evidence and his testimony. He concluded that bite marks cannot be used for conclusive matches to an individual. On the basis of Dr. Karazulas' recantation, as well as a recantation from the informant, Weimer's conviction was vacated in October 2015, and the underlying indictment was dismissed in June 2016.[17]

20. **Steven Mark Chaney:** Steven Chaney was convicted of the murder of John

[15] Rob Warden, *Exoneration Case Detail: Harold Hill*, National Registry of Exonerations, Nov. 4, 2016, https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=3296.
[16] Journey of Hope, *Greg Wilhoit*, https://www.journeyofhope.org/who-we-are/exonerated-from-death-row/greg-wilhoit/; Witness to Innocence, *Exonerees: Greg Wilhoit, 1954-2014*, http://www.witnesstoinnocence.org/exonerees/greg-wilhoit.html; *Wilhoit v. State*, 816 P.2d 545, 547 (Okla. Crim. App. 1991).
[17] Joe Mandak, *Bite-Mark Backtrack Helps Toss Verdict*, Boston Globe, Oct. 2, 2015, https://www.bostonglobe.com/news/nation/2015/10/01/woman-conviction-tossed-junk-science-bite-mark-case/Dgi1n45ib85uqdW1u2yqNO/story.html; Associated Press, *Judge Dismisses Charges in Bite-Mark Conviction,* Jun. 29, 2016, https://www.indianagazette.com/news/police-courts/judge-dismisses-charges-in-bitemark-conviction,24491656/.

Sweek, a Dallas-area cocaine dealer, in 1987; Sweek's wife was also killed. Although nine alibi witnesses accounted for Chaney's whereabouts on the day the crime occurred, the state's case relied largely on the testimony of two ABFO board-certified forensic dentists, Drs. Jim Hales and Homer Campbell. At trial, Dr. Hales purported to match a bite mark on the victim's arm to Chaney and claimed that there was a "one to a million" chance that someone other than Chaney was the biter. Similarly, Dr. Campbell opined to a reasonable degree of dental certainty that Chaney left the bite mark. Decades after Chaney's conviction, Dr. Hales admitted that his matching testimony exceeded the limits of the science and that, in contrast to his claims at trial, there was no basis for his statistical testimony in the "scientific literature." In light of the change in the scientific understanding of bite mark evidence since 1987 and Dr. Hales' recantation, the Dallas County District Attorney's Office agreed to vacate Mr. Chaney's conviction pursuant to Texas' "junk science writ," which provides an avenue for post-conviction relief where the science used at trial is subsequently discredited. In October 2015, Chaney was released after 28 years of wrongful incarceration.[18]

Although Mr. Chaney was released from custody in October 2015, he was not declared "actually innocent" until December 19, 2019 by the Texas Court of Criminal Appeals. In declaring Mr. Chaney "actually innocent", the Texas Court of Criminal Appeals cites extensively form the 2009 NAS report, invalidating the use of bite mark analysis in his conviction. More specifically, the Texas high court reasoned that "the body of scientific knowledge underlying the field of bitemark comparisons evolved in a way that discredits almost all the probabilistic bitemark evidence at trial."[19] In reaching the conclusion that bitemark evidence has been discredited, the *Chaney* court cited to the NAS Report and to new scientific research undermining the fundamental assumptions of bite mark analysis, especially research on cadavers by a SUNY Buffalo team lead by Dr. Mary Bush. After marshaling this new evidence, the State of Texas concluded that the "'bitemark evidence, which once appeared proof positive of… Chaney's guilt, no longer proves anything.'"[20]

21. **William Joseph Richards:** In 1997, Bill Richards was convicted of the 1993 murder of his estranged wife. On the night of her murder, Richards returned home from the graveyard shift at his job and discovered his wife bludgeoned to death. The crime scene evidence revealed a violent struggle, and an autopsy of the victim uncovered a crescent-shaped lesion on her hand. To analyze that wound, the prosecution contacted Dr. Norman Sperber, an ABFO Diplomate, who examined a photograph of the lesion and opined that the wound was a human bite mark. At Richards' fourth trial—the first three attempts to try Richards did not include bite mark evidence and ended in mistrials—Dr. Sperber testified that his comparison of

[18] Jennifer Emily, *Dallas County Man Freed After Serving 25 Years for Murder Over Faulty Science of Bite Marks*, Dallas Morning News, Oct. 12, 2015, http://crimeblog.dallasnews.com/2015/10/dallas-county-man-freed-after-serving-25-years-for-murder-over-faulty-science-of-bite-marks.html/.
[19] *Ex parte Chaney*, No. WR-84,091-01, 2018 WL 6710279 (Tex. Dec. 19, 2018)
[20] *Id.*

Richards' dentition to the photograph of the purported bite mark yielded a "pretty good alignment," and that Richards' teeth were consistent with the lesion. Dr. Sperber also testified that one facet of Richards' dentition was relatively rare. Richards presented an alibi defense based on the time of death, and he presented testimony from another ABFO board-certified forensic odontologist, Dr. Gregory Golden, who opined that although he could not eliminate Richards as the source of the bite, five out of fifteen sample dental molds from his clients in private practice also matched the lesion. With the introduction of the bite mark testimony, Richards was convicted and given a 25 year to life sentence.

In 2007, Dr. Sperber recanted his bite mark testimony at a post-conviction evidentiary hearing, but the California Supreme Court ultimately ruled against Richards in 2012, finding that recanted expert testimony does not constitute "false evidence." In response to the Court's decision, the California state legislature amended the habeas corpus statute the following year to explicitly deem expert recantations false evidence, and Richards filed a successive habeas petition shortly thereafter. In May 2016, the California Supreme Court finally granted his habeas petition and vacated his conviction.[21] In June 2016, the district attorney dismissed all charges against Richards.[22]

22. **Alfred Swinton:** On January 13, 1991, the body of 28-year-old Carla Terry was found in a snowbank in Hartford, Connecticut. Detectives quickly focused their attention on Alfred Swinton, who witnesses claimed to see at the bar Terry visited on the night of her death. Swinton, who was 42 years old at the time and had no significant criminal record, maintained his innocence from the outset of the investigation. Nevertheless, he was arrested several months later, after detectives recovered a bra believed to be Terry's from a common area of Swinton's apartment building. At a probable cause hearing, the state presented testimony from forensic odontologist and ABFO Diplomate Dr. Lester Luntz, who linked a bite mark on the victim's breast to Swinton's teeth. However, the court concluded that the evidence underlying Swinton's arrest was insufficient to establish probable cause, and he was released.

    The case went cold for the next several years, until officials reinvestigated the murder through a statewide effort to close previously unsolved homicides. That reinvestigation again culminated in Swinton's arrest. At a subsequent probable cause hearing, the victim's sister—who had not identified the bra in 1991—changed her testimony and asserted that she had given the bra found in Swinton's building to Terry on the night of the murder. In addition, forensic dentist Dr. Constantine "Gus" Karazulas testified for the prosecution that, to a reasonable degree of scientific certainty, Swinton was the source of the bite mark. Based on

[21] *In re Richards*, 63 Cal. 4th 291, 371 P.3d 195 (2016).
[22] Jordan Smith, *After 23 Years and Four Trials, Prosecutors Finally Dismiss Charges Against Bill Richards*, The Intercept, Jun. 28, 2016, https://theintercept.com/2016/06/28/after-23-years-and-four-trials-prosecutors-finally-dismiss-charges-against-bill-richards/.

this new evidence, the court found that probable cause existed for Swinton's arrest. Though there were only two pieces of physical evidence purportedly linking Swinton to the crime—the bra identified by Terry's sister and the alleged bite mark match—the trial spanned nearly two months, of which five days were devoted to Dr. Karazulas' testimony. Ultimately, a jury found Swinton guilty of murder, and he was sentenced to 60 years imprisonment.

In 2014 and 2015, key pieces of evidence from the murder were subjected to modern DNA testing and excluded Mr. Swinton. In particular, the testing developed a male DNA profile from swabs of the bite mark that did not match Swinton. Additionally, "touch" DNA testing was conducted on the bra; both Swinton and Terry were excluded as the source of skin cells on the bra, suggesting that the bra did not belong to Terry. In 2017, fingernail scrapings from the victim underwent testing, and the results also excluded Swinton.

Independently, Dr. Karazulas, who disavowed bite mark evidence as unvalidated and unreliable in the wake of the National Academy of Sciences' landmark 2009 report on forensic science, recanted his testimony in its entirety. On the basis of the new DNA evidence and the new evidence discrediting the bite mark comparison, Swinton filed a petition for a new trial. With the consent of the Hartford State's Attorney, the court granted Swinton's request on June 8, 2017. Following the vacatur, additional DNA testing of the victim's jeans and bra and of human hairs found at the crime scene excluded Mr. Swinton. The charged against him were dismissed on March 1, 2018, after more than 19 years of wrongful incarceration and nearly 26 years after his initial arrest.[23]

23. Sherwood Brown: Sherwood Brown spent 24 years on death row in Mississippi before his capital murder convictions were overturned. Though Brown has consistently maintained his innocence, he was implicated in the January 1993 murder of a thirteen-year-old neighbor, her mother, and her grandmother in their DeSoto County home. From the crime scene, investigators followed a trail of bloody shoeprints toward a dirt road near Brown's home. Four days later, when Brown was arrested, they seized a pair of Brown's sneakers that tested positive for blood. The arresting officers also noticed a wound on Brown's wrist. Two forensic dentists, Drs. Harry Mincer and Michael West, were called to examine the wound, which they deemed a human bite mark. At Brown's 1995 trial, Drs. West and Mincer testified that the pattern injury on Brown matched the child- victim's teeth. Dr. Mincer testified that "the teeth of [the child victim] highly probably had made the bite mark on . . . the left wrist of Sherwood Brown." He also told Brown's jury that he had a zero error rate for bite mark comparisons and "thought [he] was always right." In addition to the odontologists, the prosecution called an FBI agent,

[23] The Innocence Project, *With Consent of State's Attorney, Connecticut Court Vacates 2001 Murder Conviction Based on DNA and Other Evidence - Alfred Swinton Released*, https://www.innocenceproject.org/alfred-swinton-exonerated-and-released-after-19-years-in-prison/; David Owens and Dave Altimari, *Murder Charge Dismissed Against Alfred Swinton, Man Who Served 18 Years After Wrongful Conviction*, Hartford Courant, Mar. 1, 2018, http://www.courant.com/news/connecticut/hc-alfred-swinton-freed-20180301-story.html.

Geary Kanaskie, who testified that the sneakers seized from Brown were consistent with the crime scene shoeprints, and an acquaintance of Brown, who alleged that Brown confessed to him that he committed the murders. In 2012, Brown won the right to subject evidence from the crime scene to DNA testing. The results of the testing uncovered a foreign male's genetic profile in the child-victim's saliva, on the cup of her bra, and in hairs from scrapings of her pubic region, but Brown was excluded as the source of all the DNA, proving that she neither bit Brown nor that he attacked her. Moreover, post-conviction DNA testing revealed that the blood on Brown's sneakers did not match the profiles of any of the murder victims, severing any link between Brown and the crime scene. In October 2017, on the basis of the new DNA evidence and new research discrediting the bite mark evidence generally, the Mississippi Supreme Court vacated Brown's conviction and ordered a new trial. The case has been remanded to the Circuit Court of DeSoto County, where the State is weighing whether to pursue a re-trial.[24]

24. **John Kunco:** On December 16, 1990, a woman awoke in the early morning hours to find a man in her Westmoreland County, Pennsylvania, apartment. Over the ensuing six hours, the man raped, tortured, and bit the woman before fleeing. When she reported to the hospital, medical personnel photographed the purported bite mark on her shoulder. The victim, who was blind in one eye and farsighted in the other, could not identify her assailant, but she came to believe that Mr. Kunco—who had worked as a maintenance man in her building and whom she had met briefly once before—was the assailant after a police officer visited her in the hospital two days after the assault and, despite never speaking with Mr. Kunco, imitated the lips with which he purportedly spoke.

    While at the hospital, law enforcement agents photographed the suspected bite mark on the victim's shoulder. During the prosecutor's review of the case file, he noticed the bite mark photo and called a Pennsylvania-based Diplomate, Dr. Michael N. Sobel, who in turn consulted with Dr. Thomas David, his colleague in the ABFO. Drs. David and Sobel could not analyze the bite mark photograph because the contemporaneous picture lacked a reference scale. Instead, five months after the attack and after the wound had completely healed, the odontologists utilized a now-discredited method, pioneered by Dr. Michael H. West, to "recapture" and "illuminate" the "crucial" bite mark evidence through ultraviolet photography.[25]

    At trial, both dentists testified to a reasonable degree of dental certainty that Mr. Kunco's teeth inflicted the wound on the victim's shoulder. In his defense, Mr. Kunco presented an alibi, which was corroborated during post-conviction

[24] *Brown v. State*, 690 So.2d 276 (Miss. 1996). *See also Brown v. State*, No. 2017-DR-00206-SCT (Miss. Oct. 26, 2017) (en banc), https://courts.ms.gov/newsite2/appellatecourts/docket/sendPDF.php?f=700_342377.pdf&c=85895&a=N&s=2.

[25] Thomas J. David and Michael N. Sobel, *Recapturing a Five-Month-Old Bite Mark By Means of Reflective Ultraviolet Photography*, 39 Journal of Forensic Sciences 1560 (1994).

investigations by a witness who was on the phone with Mr. Kunco at the time of the attack and who documented their call. A jury found Mr. Kunco guilty, based on the bite mark evidence, the unreliable voice imitation, and a statement from an acquaintance who claimed to hear Mr. Kunco allude to an aspect of the attack at a holiday party. He was sentenced to 45 to 90 years imprisonment.

In 2009, Mr. Kunco's team at the Innocence Project secured DNA testing of a lamp cord used to torture the victim. Although the testing identified a male DNA profile that excluded Mr. Kunco, the court refused to vacate the conviction, ruling that the bite mark evidence was so strong that the jury would not change its verdict. He filed a subsequent petition for DNA testing in 2016, after the ABFO changed its guidelines and national reviews of bite mark evidence determined the technique to be unreliable. In addition, Drs. David and Sobel recanted their trial testimony, because the "scientific knowledge and understanding on which [their] conclusions were based . . . has changed significantly since they were given in 1991." Finding the bite mark evidence "problematic, if not entirely incredible," Pennsylvania courts allowed Mr. Kunco to conduct additional DNA testing, which excluded him from a single-source unknown male's DNA profile from blood on the blanket on which the victim was raped. In light of the discredited bite mark evidence and the outcome of the DNA testing, on May 23, 2018, the Westmoreland County Court of Common Pleas vacated Mr. Kunco's 1990 conviction, though prosecutors have indicated that they intend to retry Mr. Kunco.[26]

25. **Gary Cifizzari**: On September 29, 1979, 75-year-old Concetta Schiappa's badly beaten body was found in her home in Milford, Massachusetts. She had been savagely raped and bludgeoned to death. During the autopsy, a forensic dentist and past president of the American Board of Forensic Odontology (ABFO), Dr. Stanley Schwartz, took photographs of the bruises on Schiappa's body and used rubber molds to make impressions of the marks. Police initially suspected her neighbor, Michael Giroux, because Schiappa had accused him of entering her home and stealing money earlier that year. Although Mr. Giroux's statements to police about his whereabouts the night of the murder were inconsistent, police dropped him as a suspect, and the case ran cold. Years later, Gary Cifizzari's brother Michael, who suffered from schizophrenia, came to the police station seeking food and shelter. Apparently because Michael was related to the victim (he and Gary were Schiappa's great-nephews), police questioned Michael about the murder. After hours of coercive interrogation, Michael falsely confessed, claiming that he and his cousin, Robert Cananzey, had been "drugged out" and gone to Schiappa's house to ask for money and attacked her. Detectives asked Michael whether he was sure that he had been with Cananzey, and not his brother, Gary. Michael then implicated Gary.

Michael Cifizzari was convicted of murder and sentenced to life in prison, where he

[26] *Commonwealth v. Kunco*, 2017 PA Super 345.

died 2000. Gary Cifizzari was tried separately in Worcester County Superior Court. The State's case against him was based almost solely the testimony of three forensic dentists: Schwartz, Richard Souviron, and Anthony Captline. All three expert witnesses "matched" Gary Cifizzari's teeth to two alleged bite marks on Schiappa's body; Sourviron testified that "the teeth of Gary Cifizzari were the teeth that inflicted both bitemarks, one on the leg and one on the stomach."[27]

Cifizzari was convicted of first-degree murder and sentenced to life in prison without the possibility of parole. Always maintaining his innocence, Cifizzari immediately appealed his conviction, challenging the admission of the bite mark testimony. But in a case of first impression for Massachusetts, the state's high court rejected Cifizzari's argument that bite mark should not have been admitted because it had not gained acceptance in the scientific community. Instead, the court found that "a foundation need not be laid that such evidence has gained acceptance in the scientific community. What must be established is the reliability of the procedures involved, such as X-rays, models, and photographs."[28] Thus, Cifizzari's appeal not only condemned him to life in prison for a crime he did not commit, but also opened the door for other defendants to be tried in Massachusetts based on the same grossly unreliable technique. (Cases of first impression in two other states also approved the admission of bite mark evidence in wrongful conviction cases, Levon Brooks in Mississippi and Robert Lee Stinson in Wisconsin.)

In 2017, Mr. Cifizzari became a client of the New England Innocence Project. In 2018, NEIP moved for DNA testing of dozens of pieces of physical evidence retained from the case. Ultimately, DNA testing conducted on various items recovered from the crime scene excluded Cifizzari and his brother Michael. A DNA profile developed from the victim's nightgown was uploaded was matched to Michael Giroux, the police's initial suspect. Giroux went on to commit additional violent crimes, including another homicide in Rhode Island. On July 16, 2019 Mr. Cifizzari was freed after 35 years of wrongful imprisonment and on December 10, 2019 prosecutors dismissed the indictment.

26. **Sheila Denton**: On May 21, 2004, Eugene Garner's body was found at his residence in Waycross, Georgia. He had been beaten and strangled to death. Police initially questioned Sharon Jones about the murder. Ms. Jones, a crack cocaine user who could not distinguish between days of the week, was initially interrogated as a potential suspect and was told by the police that there was videotape of her at the scene, along with her fingerprints.[29] Pressured by the police to name another suspect or she herself would be charged with the murder, Ms. Jones claimed that

[27] Ken Otterbourg, *Gary Cifizarri*, Jan. 8, 2020, https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=5650.
[28] *Commonwealth v. Cifizzari,* 397 Mass. 560, 573, 492 N.E.2d 357 (1986).
[29] Jessica Noll and Andy Pierotti, *Flawed Forensics: Woman's Fate Hangs on 'Garbage' Evidence*, 11Alive News, Nov. 16, 2018, https://www.11alive.com/article/news/investigations/flawed-forensics-womans-fate-hangs-on-garbage-evidence/85-7fa789d6-32ba-4515-80e3-36ce796571d6.

Sheila Denton had implicated herself in the crime.[30] The police then located and interrogated Ms. Denton, an acquaintance of the deceased. Although she maintained her innocence, the police rejected her statement and charged her with Mr. Garner's murder in June of 2004.

At autopsy, an injury on Ms. Garner's body was identified as a potential bite mark. A mark on Ms. Denton's arm, photographed upon her arrest, was considered a potential bite mark as well. Dr. Thomas David, DDS, a Diplomate of the American Board of Forensic Odontology (ABFO), the board-certifying body for forensic dentists, examined the alleged bite marks and outlines of Ms. Denton and Mr. Garner's teeth. At trial, Dr. David testified: "Based on an evaluation of all evidence available, it is my opinion that the bite mark on the left arm of Sheila Denton was probably made by Eugene Garner. It is also my opinion that the bite mark on the right arm of Eugene Garner was probably made by Sheila Denton. I hold these opinions to a reasonable degree of scientific certainty."[31]

Aside from the supposed bite mark evidence, the only other evidence introduced at trial was Ms. Jones' statement, who admitted that she was high on crack at the time she claimed Ms. Denton had implicated herself and that she did not actually believe Ms. Denton when she made the alleged inculpatory statement. Indeed, in his closing statement, the prosecutor told the jury that without the "bite mark" evidence, there was reasonable doubt. Ms. Denton was nevertheless convicted of felony murder and sentenced to life in prison.

In 2017, the Southern Center for Human Rights (SCHR) filed a motion for a new trial based on the discrediting of bite mark analysis as forensic technique. With the assistance of the Innocence Project, Ms. Denton obtained affidavits from five forensic dentists, all of whom stated that bite mark evidence is fundamentally unreliable and should not have been used to convict Ms. Denton. Moreover, the experts opined, based on today's scientific standards and understanding of the limitations of bite mark evidence, that none of the injuries claimed were even bite marks in the first place, despite Dr. David's testimony to the contrary.

On May 29, 2018, an evidentiary hearing was held on the validity of the bite mark evidence generally, and the specific evidence presented at Ms. Denton's trial. Following the evidentiary hearing, the Court concluded that the "bite mark evidence presented in [Ms.] Denton's trial was not competent evidence."[32] And on February 7, 2020, the Chief Judge of the Superior Court for the Waycross Judicial Circuit in Georgia reversed Ms. Denton's 2004 murder conviction. Finding that "the bite mark evidence used at trial is now know to be unsupported by science,"[33] the Court went on to state that bite mark evidence "will seldom, if ever, be probative of one having inflicted a particular bite mark, nor shall it likely be of any

[30] *State v. Denton*, 04R-330 at 338 (Ware Cnty. Super. Ct. Mar. 13, 2006).
[31] *Id*. at 158-159.
[32] *State v. Denton*, 2020 Ga. Super. LEXIS 5*35 (Feb. 7, 2020).
[33] *Id.* at 24.

aid to a jury in reaching a decision. The future of admissibility of such evidence is dubious at best."[34] On April 8, 2020, with the consent of the State, Ms. Denton was released from prison after serving over 15 years.

On September 9, 2026, Ware County Superior Court Judge J. Kelly Brooks granted the State's motion to dismiss the indictment, fully exonerating Ms. Denton 22 years after her wrongful conviction.[35]

27. **Robert DuBoise**: On August 18, 1983, Robert DuBoise was charged with first-degree murder in the death of Barbara Grams. Ms. Grams' severely beaten body was discovered in the early morning hours the following day, behind a dentist's office. Ms. Grams was lying on her back, nude except for a tube top that had been pulled down, exposing her breasts, and her face was covered in blood.

During the autopsy, the medical examiner noticed an injury on the victim's left cheek he believed to be a bite mark that had been inflicted at or near the time of her death, sometime between 6:30 p.m. to 7:30 a.m. Dr. Richard Powell, a local dentist "confirmed" that this was a human bite mark.

The following day, with no eyewitnesses to the crime or other forensic evidence, police interviewed individuals who had known Ms. Grams and lived in the vicinity of the crime scene, including Terry Lynn Joseph, an employee of a bar police theorized Ms. Grams had gone to after work. Although Joseph could not identify Ms. Grams from a photo, and had no information about the crime, she speculated about possible suspects, "Robert," "Ray," and "Bo", and told police where she believed they lived. Police went to the house Joseph identified and found no one there, but they found mail addressed to members of Mr. DuBoise's family.

Det. Phillip J. Saladino subsequently conducted a background check on Mr. DuBoise and found that he had an arrest record for two non-violent offenses. On September 25, 1983, Det. Saladino went to Mr. DuBoise's home and Mr. DuBoise volunteered to go with the detective to the police station. Mr. DuBoise had heard police were "making bite mark impressions of everything and anything that was around the area." He told Det. Saladino that he would prove he "wasn't the guy that bit the girl," and that he had "nothing to hide."

Mr. DuBoise's beeswax bite impressions were given to ABFO board- certified forensic dentist Dr. Richard Souviron on October 13, 1983. Dr. Souviron concluded that Mr. DuBoise inflicted the bite on Ms. Grams' face and Mr. DuBoise was charged with murder the following week. At trial, Dr. Souviron testified that Mr. DuBoise inflicted the wound on the victim. The only other evidence proffered by the State was testimony from a jailhouse informant, who claimed that Mr. DuBoise told him that he and his brother Victor, and a friend named Ray Garcia, had raped

[34] *Id.* at 17.
[35] *State v. Denton*, J. of Nolle Prosequi, No. 04R-330 (Ga. Super. Ct. Sept. 9, 2026)

and murdered Ms. Grams. (Neither Victor nor Ray were ever arrested.)

On March 7, 1985, Mr. DuBoise was convicted of first-degree murder and attempted sexual assault. The jury recommended a life sentence, but the judge "overrode" the recommendation and sentenced Mr. DuBoise to death. In 1988, the Florida Supreme Court vacated his death sentence because it was improper for the judge to override the jury's decision.

In 2006, Mr. DuBoise filed for post-conviction DNA testing but at a hearing it was determined that all the evidence from his trial had been destroyed in 1990. Hairs collected from the scene were still available, however the judge ultimately denied Mr. DuBoise's motion to test the hairs, concluding that because the prosecution's theory was that Mr. DuBoise committed the crime with two other individuals, excluding him from that evidence would not be sufficient to prove his innocence.

The Innocence Project accepted Mr. Duboise's case in 2018 and asked the Hillsborough County District Attorney's Conviction Review Unit ("CRU") to re-open the case and engage in a joint re-investigation. The investigation revealed previously undisclosed evidence that the jailhouse informant, who was facing a life sentence, was sentenced only to time served and immediately released after testifying at Mr. DuBoise's trial. As the joint re-investigation was coming to a close, the CRU learned that the medical examiner had still retained the vaginal, oral, and rectal slides from the autopsy. Subsequent DNA testing excluded Mr. DuBoise and identified the actual perpetrator, an individual who was already serving multiple life sentences.

On August 27, 2020 Mr. DuBoise was freed from prison after serving 37 years of wrongful imprisonment and he was fully exonerated on September 14, 2020.[36]

28. **Eddie Lee Howard**: On the evening of February 2, 1992, Georgia Kemp was discovered dead in her home in Columbus, Mississippi. There were no eyewitnesses and no forensic evidence pointing to a suspect. On February 3, 1992, Dr. Steven Hayne performed an autopsy, concluding that Ms. Kemp had been beaten, strangled, stabbed, and raped. According to Dr. Hayne, Kemp's ultimate cause of death was stab wounds to her chest. The autopsy report did not note any "bite marks" on the victim's body and photos taken prior to autopsy showed no "bite marks." The victim's remains were then buried.

Acting without leads, police arrested several local men, all of whom were Black men with prior convictions, including Eddie Lee Howard. On the same day as Mr. Howard's arrest – February 6th – Ms. Kemp's post-autopsy remains were disinterred, because, according to Dr. Hayne, "[t]here was some question that… there could be injuries inflicted by teeth."[37] Also that same day, police took Mr.

[36] The Innocence Project, *Robert DuBoise Officially Exonerated from Murder Charge After Nearly 37 Years*, https://innocenceproject.org/robert-duboise-officially-exonerated-of-murder-after-nearly-37-years/.
[37] *Howard v. State*, 853 So.2d 781, 785 (Miss 2003).

Howard to a local dentist, where he consented to having a mold taken of his teeth.[38]

Det. David Turner then contacted Dr. Michael West, a forensic odontologist from Hattiesburg, to examine Ms. Kemp's body. Upon arrival at the morgue, Det. Turner gave Dr. West the dental mold of Mr. Howard's teeth. By using an ultraviolet light, Dr. West determined there were otherwise invisible marks on the remains of the victim's right breast, the right side of her neck, and her right arm. Dr. West claimed all three "bite marks" matched Mr. Howard's teeth.

Mr. Howard was indicted on the charge of capital murder with the underlying felony of rape. Mr. Howard represented himself at trial and was convicted in 1994 and sentenced to death. In 1997, his conviction and sentence were reversed and remanded for a new trial, which began on May 22, 2000. Dr. West again testified at the second trial that the bite marks on Ms. Kemp's neck and arm were "consistent with" Mr. Howard's teeth and the alleged bite mark on Kemp's right breast was an "identical" match to Mr. Howard's dental impressions. Dr. West averred that he had "no doubt" Mr. Howard had left the mark. Mr.
Howard was again convicted of capital murder and sentenced to death. At trial, Dr. West offered no photographs of the alleged injury – no photographs of the remains of the exhumed, collapsed, and dissected corpse, or even an outline of Mr. Howard's teeth purporting to demonstrating the "match."

In 2008, the Innocence Project and the Mississippi Innocence Project sought DNA testing, which the trial court denied. In 2010, the Mississippi Supreme Court granted Mr. Howard the right to conduct DNA testing on dozens of items from crime scene evidence. Mr. Howard was excluded from every piece of evidence tested. Significantly, blood and male DNA found on the blade of the knife believed to be the murder weapon excluded Mr. Howard. While Dr. West had claimed that he saw bite marks on the victim's body in areas that would have come in contact with her nightgown, her nightgown contained no saliva or other male DNA.

In August 2015, the Mississippi Supreme Court remanded the case to the trial court to conduct an evidentiary hearing on whether the newly discovered evidence entitled Mr. Howard to a new trial. At the evidentiary hearing, Mr.
Howard also offered new evidence regarding the forensic and DNA testing on the physical evidence left at the scene of the crime. The trial court denied Mr. Howard's petition for postconviction relief.

On August 27, 2020, The Mississippi Supreme Court vacated and overturned Mr. Howard death sentence. Noting that an "individual perpetrator cannot be reliably identified through bite-mark comparison"[39] the Court overturned Howard's conviction based on "the inadmissibility of Dr. [Michael] West's identification of Howard as the biter," which it called "the State's most important evidence at

[38] *Howard v. State*, 945 So.2d 326, 333 (Miss. 2006).
[39] *Howard v. State*, 300 So. 3d 1011, 1013 (Miss. 2020).

Howard's trial" as well as new DNA test results which exclude Howard.[40] In a concurrence, Justice Kitchens wrote that, "Not only have the ABFO [American Board of Forensic Odontology] guidelines changed, but Dr. West's credibility also has been destroyed since Howard's trial. In the intervening years, West and his methodology have plunged to overwhelming rejection by the forensics community…."[41] Justice Kitchens further wrote that the Mississippi Supreme Court "should not uphold a conviction and death sentence on the testimony of a proven unreliable witness, Dr. West."[42]

On January 7, 2021, the prosecution dismissed the case. Howard subsequently filed a claim for compensation with the state of Mississippi and was awarded $400,000.

29. **Gilbert Poole:** On June 7, 1988, Robert Mejia's body was found stabbed to death near a running trail in Pontiac, MI.[43] There were no eyewitnesses to the crime and police could not identify any suspects. The case went cold until six months later—when Connie Cook implicated Gilbert Poole, her then-boyfriend, in the murder.

    On December 27, 1988, the police arrested Mr. Poole and charged him with Mejia's murder. Ms. Cook became the State's key witness in Mr. Poole's 1989 trial despite her inability to provide accurate details about the timeline of the crime. Due to the failures of Mr. Poole's attorney, several blood samples from the crime scene that excluded Mr. Poole as a potential source were never presented at trial.[44]

    The only evidence linking Mr. Poole to the crime scene was expert testimony "matching" an alleged bite mark on the victim's body to Mr. Poole. At trial, Dr. Allan Warnick, a board-certified forensic dentist, testified: "This could not be done coincidently because everybody's teeth are unique, and there's been studies that the individuals are very, very unique [...] So we come up with numerous points of matching with no inconsistencies at all, and it's my expert opinion that the marks made on the victim's arm were made by Mr. Poole."[45]

    On June 6, 1989, the jury convicted Mr. Poole of first-degree murder and the court sentenced him to life in prison without the possibility of parole.[46]

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[40] *Id.* at 1019.
[41] *Id*. at 1023.
[42] *Id*.
[43] Ken Otterbourg, *Exoneration Case Detail: Gilbert Poole, Jr.*, National Registry of Exonerations, May 24, 2023, https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=5979.
[44] WMU-Cooley Innocence Project, *WMU-Cooley Innocence Project Paves the Way for Release of Gilbert Poole After 32 Years of Wrongful Imprisonment,* Western Michigan University, May 26, 2021, https://www.cooley.edu/news/wmu-cooley-innocence-project-paves-way-release-gilbert-poole-after-32-years-wrongful.
[45] Otterbourg, *Gilbert Poole, Jr.*
[46] *Id*.

Mr. Poole's first appeal was denied in 1993. The trial and appellate courts also denied his 2005 petition to have the court test the blood evidence found at the crime scene. In 2008, after the widespread discrediting of bite mark analysis,[47] Mr. Poole filed a habeas petition in the U.S. District Court for the Eastern District of Michigan challenging Dr. Warnick's bite mark testimony. Although the court acknowledged that Warnick's testimony was flawed, it denied Mr. Poole's petition on the basis that it did not meet the "actual innocence standard." The Sixth Circuit U.S. Court of Appeals also rejected Mr. Poole's appeal and the U.S. Supreme Court declined to hear the case.[48]

Finally, in 2015, the Michigan Supreme Court reversed the Michigan Court of Appeals' prior ruling and allowed the Michigan State Police to conduct DNA testing of the blood samples from the crime scene.[49] In 2016, Dr. Karl Reich, a DNA analyst with his own independent lab, reviewed the results and concluded that Mr. Poole was "excluded as a contributor to all tested samples and there is evidence of an unknown contributor who is not the defendant or the victim."[50]

On May 26, 2021, the Michigan University Cooley Law School Innocence Project partnered with the Michigan Attorney General's Conviction Integrity Unit to request that the Oakland County Circuit Court Judge, Rae Lee Chabot, vacate Mr. Poole's conviction and dismiss his charges. The request was approved and, a few hours later, Mr. Poole was released from the Cotton Correctional Center in Jackson, MS, after 32 years of wrongful imprisonment.

30. **Leigh Stubbs &**
31. **Tammy Vance:** On the evening of March 5, 2000, 20-year-old Leigh Stubbs and 31-year-old Tammy Vance were discharged from Cady Hill, a drug rehabilitation facility in Columbus, Mississippi.[51] They agreed to allow 21-year-old Kimberly Williams, who also was being discharged, to travel with them. After spending the night in a hotel, they drove the next day to the home of James Ervin, who had been dating Williams. Ervin was recuperating from a car accident and was taking Oxycontin for pain. Vance and Stubbs left Ervin's house. Williams followed later, carrying Ervin's Oxycontin. Stubbs drove the truck, and Vance and Williams began drinking alcohol and taking Oxycontin. They intended to drive to Vance's home in Louisiana, but they got lost.

    They stopped to spend the night at a Comfort Inn in Brookhaven, Mississippi. By that time, Vance and Williams had passed out, and Stubbs had to help them into their room. The next afternoon, Stubbs and Vance noticed Williams was having

[47] Daniele Selby, *Why Bite Mark Evidence Should Never Be Used in Criminal Trials*, Innocence Project, Apr. 26, 2020, https://innocenceproject.org/what-is-bite-mark-evidence-forensic-science/.
[48] *Id*.
[49] *People v. Poole*, 497 Mich. 1022, 862 N.W.2d 652 (2015).
[50] WMU-Cooley Innocence Project, *Paves the Way*.
[51] Case summary condensed from Maurice Possley, *Exoneration Case Detail: Leigh Stubbs and Tammy Vance*, National Registry of Exonerations, Oct. 3, 2021, https://www.law.umich.edu/special/exoneration/pages/casedetail.aspx?caseid=5399.

difficulty breathing. They called the front desk to ask that an ambulance be summoned because Williams apparently had overdosed.

Stubbs and Vance took turns administering cardiopulmonary resuscitation on Williams. Stubbs and Vance told paramedics that the last time they saw Williams in a conscious state was the previous night. Stubbs and Vance took the Oxycontin from Williams's purse and gave the pills to the paramedics.

Williams was unconscious when she was taken to a hospital in Brookhaven, where she was given several drugs to reverse the effects of the alcohol and Oxycontin. A nurse noted several injuries on Williams's body: her breasts were swollen, her vagina was swollen and bruised, and there were marks across her buttocks, as though she had been struck with a belt or stick. Dr. Joe Moak believed the injuries indicated a "brutal sexual assault." He said the injuries appeared to be two to four days old and looked like "something a man would do." That day, Williams was transferred to Baptist Hospital in Jackson, Mississippi for further treatment. There, Dr. Richard Whitel, a neurologist, discovered a lesion on Williams's head, although a CAT scan suggested there was no significant trauma to the head.

On March 10, the Lincoln County District Attorney's Office asked forensic odontologist Dr. Michael West to examine Williams for possible evidence of sexual assault. West videotaped and photographed the injuries on Williams's body and reported to the prosecutor that Williams had a bitemark on her right hip. West asked for dental impressions of any suspects to make a comparison. Subsequently, West concluded that Stubbs likely made the bitemark on Williams's hip. West also told the prosecution that although he had not seen any head injury on Williams during his first visit, on this second visit, he found three head wounds.

West went to the Brookhaven Police Department where he viewed a surveillance video from the Comfort Inn. West would later testify that he later enhanced the video on his home computer and determined that he saw Stubbs pull a body of a woman with dark hair out of a large toolbox in the back of Stubbs's truck. After examining the truck and toolbox, West concluded that one latch of the box was responsible for the wounds on Williams's head, and that similar wounds on Williams's body below the bitemark were made by the other latch.

In June 2000, a Lincoln County grand jury indicted Stubbs and Vance on charges of assaulting Williams, conspiracy to possess Oxycontin and to commit grand larceny, and possession of Oxycontin.

They went to trial in June 2001 in Lincoln County Circuit Court. A Comfort Inn desk clerk testified that when Stubbs rented the room, she expressed concern about the safety of their belongings in the bed of the truck. The clerk said there were security cameras in the parking lot. Stubbs said that Vance and Williams were passed out in the truck and that she was going to have to help them into the motel room. The clerk said Stubbs appeared tired, but not drunk or nervous. The

prosecution called two witnesses who testified that Stubbs and Vance had romantic feelings toward each other and that they saw them kissing.

West told the jury he was a general dentist, a forensic consultant, a forensic odontologist, and an expert on wound patterns who had "investigated over four thousand deaths . . . attended over two thousand autopsies . . . ordered about five hundred autopsies" and "analyzed over three hundred bitemarks." The jury was shown West's video of Williams's head and thigh injuries. West testified that the injuries were the result of someone slamming down the lid of the toolbox three times on Williams when she was inside it.

West testified that although the wound that he said was a bitemark had swollen by the time he attempted to make a comparison, he was able to exclude Vance, Williams's boyfriend Ervin, and Ervin's brother as the source of the mark. He testified that he could not exclude Stubbs. "And it's more than just a possibility to me, I would see it as a probability," West testified. He added, "But is it a probability of actual 100 percent? No."

West testified that he viewed the Comfort Inn surveillance video and "in its original form and then with it blown up and with some computer enhancement." West said that he saw Stubbs and Vance coming in and out of the motel room at various times, though never together. He said the tape showed them removing Williams from the toolbox and carrying her into the motel room.

Williams testified she did not have any memory of what happened to her after she left Ervin's house. She testified she remembered someone took Ervin's drugs, but she was unable to recall who it was. Williams also remembered she was not injured at the time she was visiting Ervin.

Two Mississippi Crime Lab employees testified for the defense that when Williams's clothing was examined, no semen was found, and the hair found in the toolbox was not similar to Williams's hair. Dr. Rodrigo Galvez, a forensic pathologist, testified that Williams could not have fit inside the toolbox. He also said the hinges on the box lid were stiff and did not allow the box to be closed with enough force to have caused the injuries on Williams's head and leg. He did agree the 37 inches between the injuries coincided with the latches on the toolbox. Galvez also testified there were many objects, other than teeth, that could have left the mark on Williams's hip that West said was a bitemark, such as a flashlight or the heel of a shoe. He said that when he first saw the video of the bitemark, he thought it was an animal bite.

During cross-examination, the prosecution attempted to reinforce its theory that some of the injuries were the result of a sexual assault, asking Galvez where he would "expect to find biting or would be biting consistent with a lesbian-rape type situation." "Yes," Galvez said. "In homosexual crimes…they are very sadistic…They do what we call the over kill. They do tremendous damage,

tremendous damage… They're more gory, the more repulsive crimes I've ever seen were homosexual to homosexual."

On June 30, 2001, the jury convicted Vance and Stubbs of assault resulting in serious bodily injury, possession of morphine and conspiring to possess morphine and to commit grand larceny. They were each sentenced to 44 years in prison, and ordered to pay $115,000 in fines and costs, as well as half of Williams's medical bills. The Mississippi Supreme Court upheld the convictions in 2003. Federal petitions for a writ of habeas corpus were denied in 2008.

By that time, West's testimony on bitemarks had been seriously undermined. Two men convicted in Mississippi based on bitemark testimony from West—Levon Brooks and Kennedy Brewer—were exonerated in 2008 by DNA testing.

In August 2008, the FBI responded to a Freedom of Information Act request filed by Stubbs's father, Alfred, requesting any documents relating to any analysis performed on the surveillance video from the Comfort Inn. The FBI reported that the prosecution had submitted the video, but that—in contrast to West's testimony—FBI analysts only saw one person in the video, not two, and they could not say what that single person was doing. The FBI analysts could not tell what was being removed from the truck—and were certain that it was not a body as West testified.

In 2011, Stubbs and Vance, represented by the Mississippi Innocence Project, filed a petition for post-conviction review. They claimed the convictions should be set aside because West presented false evidence and because the prosecution had failed to disclose that results of the FBI analysis of the surveillance video. The petition also claimed that the trial defense attorneys had provided an inadequate legal defense by failing to object to the prejudicial testimony regarding the relationship between Vance and Stubbs and the testimony about homosexual violence.

In 2011, West testified during a deposition for the case that he no longer believed his own testimony regarding bitemark evidence and that the existing science did not support bitemark identification. "When I testified in this case, I believed in the uniqueness of human bitemarks. I no longer believe in that. And if I was asked to testify in this case again, I would say I don't believe it's a system that's reliable enough to be used in court."

Lincoln County Circuit Court Judge Michael Taylor held a hearing on the petition for post-conviction relief in February 2012. In June 2012, Judge Taylor granted the petition, vacated the convictions of Stubbs and Vance, and ordered a new trial. The judge ruled that the failure to disclose the FBI report of its analysis of the surveillance video deprived Vance and Stubbs of a fair trial. Judge Taylor did not address the admissibility or credibility of West's testimony.

On June 27, 2012, nearly 11 years after they were convicted, Stubbs and Vance

were released on bond pending a retrial. On December 9, 2013, Stubbs and Vance pled no contest to a charge of possession of Oxycontin and were sentenced to time served. The prosecution dismissed the remaining charges. Stubbs' conviction for possession was expunged in 2015.

32. **Albert "Ian" Schweitzer:** On February 16, 2000, Ian Schweitzer was convicted of the rape and murder of 23-year-old Dana Ireland and sentenced to 130 years in prison. Mr. Schweitzer's brother, Shawn Schweitzer, and another man, Frank Pauline, Jr., who passed away in 2015, were also convicted of the same crime. Nine years earlier, on December 24, 1991, Ms. Ireland was the victim of a suspected hit-and-run while on a bicycle on Kapoho Kai Drive on Hawaii Island. She was later found badly beaten and raped on a fishing trail in the Wa'a Wa'a neighborhood of Hawaii County, Hawaii. Ms. Ireland was transported to a nearby hospital in Hilo, Hawaii, where doctors observed that she had sustained a large laceration to her scalp, multiple contusions and abrasions all over her body, and a broken pelvis and clavicle, among other injuries. Doctors also observed what they believed to be a human bite mark to her left breast.[52] While at the hospital, a rape kit was performed. Oral, anal, and vaginal swabs were collected, along with pubic hair combings, her remaining clothes, and the gurney sheet that was used to transport her in the ambulance.[53] Investigators found several pieces of evidence at both crime scenes: at the first location (where the hit-and-run occurred), evidence collected included one of Dana Ireland's shoes, her watch, a clump of hair, and the bicycle that was involved in the accident. At the second location (where Ms. Ireland's body was discovered), they collected additional articles of clothing, a pair of men's underwear, a t-shirt soaked in what was later discovered to be Ms. Ireland's blood, beer bottles, cigarette butts, and a child's sneaker and socks.[54]

    However, investigators failed to develop any leads. The case seemingly went cold until May of 1994, almost three years after the murder, when prosecutors supposedly got a break in the case. A prison informant named John Gonsalves (a relative of Frank Pauline Jr.) claimed to authorities that Pauline had been present at the time of the crime and could provide additional information to authorities. At the time, Pauline was serving a 10-year sentence for sexual assault and theft. He told police he had witnessed the Schweitzers' attack on Ms. Ireland, but he did not participate in the rape. He claimed Ian Schweitzer insisted that Ms. Ireland must be killed so that she could not identify them later, and so Pauline had hit her on the head with a tire iron with the intention of ensuring that she was killed.[55] Despite these claims, Pauline was not able to provide authorities with a physical description of the victim, nor was he able to recall whether she was riding a bike. Police

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[52] *State v. Pauline*, 100 Hawai'i 356, 60 P.3d 306 (Haw. 2002), http://oaoa.hawaii.gov/jud/22961.htm.
[53] Ken Otterbourg, *Exoneration Case Detail: Albert Ian Schweitzer*, National Registry of Exonerations, Feb. 15, 2023, https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=6540.
[54] Otterbourg, *Albert Ian Schweitzer*; Marco Garcia, *Hawaii Man in Prison for Woman's 1991 Murder and Rape Released after Lawyer Presents New Evidence*, CBS News, Jan. 25, 2023, https://www.cbsnews.com/news/albert-ian-schweitzer-dana-ireland-hawaii-man-imprisoned-womans-1991-murder-rape-released-new-evidence/.
[55] *State v. Pauline*.

interviewed Pauline at least seven times over the following two years, and his accounts were inconsistent. Furthermore, the information that both Gonsalves and Pauline provided to authorities contradicted the Schweitzers' statements. The brothers had told investigators about a longstanding feud between their family and Pauline's, which made the likelihood of them being together and committing such an act improbable. In 1996, Pauline admitted that he had been lying to authorities in the hopes of escaping death threats in prison and helping Gonsalves to get his drug charges dropped by cooperating with police.[56]

In July and October of 1997, after Pauline and the Schweitzers were indicted, various pieces of evidence were submitted for DNA testing. The gurney sheet, the t-shirt, the swabs from the rape kit, and the pair of men's underwear were all tested. The results indicated that all 3 men had been excluded as sources of the DNA.[57] In 1998, the Hawaii County Prosecutor's Office dismissed the indictments against both Schweitzer brothers. However, in May of 1999, a man named Michael Ortiz informed prosecutors that Ian Schweitzer had confessed to him about his role in Dana Ireland's death. The Schweitzer brothers were indicted again in May of 1999, and convicted and sentenced in 2000.

In January of 2018, Ian Schweitzer filed for a new trial. His motion claimed that new and previous DNA testing had excluded him as a contributor, the state had used junk science (including bite mark evidence) to convict him, and that he was inadequately represented by his counsel. In 2019, the Hawaii Innocence Project and the Innocence Project in New York entered into a joint reinvestigation agreement with the Hawaii County Prosecutor's Office. On January 23, 2023, the Hawaii Innocence Project and the Innocence Project in New York filed a motion to vacate Ian Schweitzer's conviction and release him from custody. The attorneys argued for his release based on the discrediting of bitemark evidence, updated DNA testing, and expert testimony that revealed Schweitzer's Volkswagen Beetle could not have made the tire tracks that were found at both crime scenes. During the investigation, police had collected dental impressions from the Schweitzer brothers. A forensic odontologist initially excluded Ian Schweitzer as a contributor, but later stated that his teeth were "consistent with the bite."[58] The previous DNA evidence in the case had excluded all three men as contributors, and instead showed that the DNA belonged to an unknown male who is believed to be the real perpetrator of the crime. Additionally, new DNA evidence showed that the t-shirt found on the fishing trail belonged to the same unknown man, and not any of the three convicted men as prosecutors had previously claimed. Furthermore, expert testimony from Matthew Marvin (that was not previously presented to the jury) stated that the tire tread width and distance between the tires from the marks at the crime scene did not match a Volkswagen Beetle and were more consistent with a truck or van, excluding Mr. Schweitzer's vehicle.

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[56] *State v. Pauline*; Otterbourg, *Albert Ian Schweitzer*.
[57] Otterbourg, *Albert Ian Schweitzer*; Hawaii Innocence Project, *Albert Ian Schweitzer*, https://www.hawaiiinnocenceproject.org/albert-ian-schweitzer.
[58] Otterbourg, *Albert Ian Schweitzer*.

Regarding the bitemark evidence, Dr. Charles Reinhold had performed the autopsy on Dana Ireland and testified that she had sustained extensive injuries. His testimony included discussion of injuries on Ms. Ireland's chest, specifically on the left-hand side of her breast. Dr. Reinhold had testified that the pattern of the injury sustained was "very characteristic for a bite mark of the breast area." Dr. Adam Freeman, former president of the American Society of Forensic Odontology (ASFO), stated in an affidavit that "the injury Dr. Reinhold testified was a bite mark is not actually a bite mark. Because that threshold cannot be satisfied in this case, there would be no comparison, under today's standards, between the injury and any known dentition."[59] Dr. Freeman also expressed that two out of the three experts who looked at the bitemark evidence had questioned whether it was truly a bite mark.[60]

Finally, on January 24, 2023, Judge Peter Kubota dismissed Ian Schweitzer's conviction. He was set free after 25 years of being wrongfully incarcerated.

33. **Jimmie "Chris" Duncan:** On the morning of December 18, 1993, Jimmie "Chris" Duncan was caring for Haley Oliveaux, the 23-month-old daughter of his then girlfriend, Alison Layton Statham. After placing Haley in a bath, Mr. Duncan went downstairs to clean up the kitchen. He heard a thump and went upstairs to check on Haley, whom he found lying face down in the tub. He picked her up, attempted to revive her and rushed next door for help. Despite the life-saving efforts of Mr. Duncan, his neighbor, first-responders, and medical professionals, Haley was pronounced dead at the hospital later that morning.[61]

    Mr. Duncan was taken from the hospital to the police station to give statements about the incident. While sobbing, Mr. Duncan described the morning. He told the police that he made breakfast, fed Haley, and then placed her in a shallow bath. He left the bathroom to tidy up the house and returned after Haley called out for him because she had defecated. He cleaned her up, let her finish in her potty, cleaned the tub, and then drew up a fresh, shallow bath. He placed her back and watched her play with her rubber toys before leaving to do the dishes. When he returned, Haley was face down in the bathtub. The police investigation, led by Detective Chris Sasser, revealed a scene matching Mr. Duncan's description. He was initially charged with negligent homicide for leaving the child unattended in the bathtub.[62] Meanwhile, Haley's body was sent to Mississippi for autopsy by the notorious

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[59] Otterbourg, *Albert Ian Schweitzer*; Hawaii Innocence Project, *Albert Ian Schweitzer*; Garcia, *Hawaii Man Released*; The Innocence Project, *Ian Schweitzer Exonerated of Murder After 25 Years in Hawaii*, May 1, 2023, https://innocenceproject.org/news/ian-schweitzers-exonerated-murder-25-years-hawaii; John Burnett, *Judge Overturns Ian Schweitzer's Conviction in Dana Ireland's Rape, Murder*, Hawaii Tribune-Herald, Jan. 25, 2023, https://www.hawaiitribune-herald.com/2023/01/25/hawaii-news/judge-overturns-ian-schweitzers-conviction-in-dana-irelands-rape-murder-2.

[60] Peter Boylan and Jennifer Kelleher, *Dana Ireland Murder Case: Freed*, Honolulu Star-Advertiser, Jan. 25, 2023, at A4, https://www.newspapers.com/image/945448394/?terms=ian+schweitzer+bite+mark.

[61] *State v. Duncan*, 437 So. 3d 779, 784 (La., 2026)

[62] Id.

forensic pathologist, Dr. Stephen Hayne. Dr. Hayne claimed to observe evidence of sexual assault and potential bite marks on the body, although no such marks were observed by hospital staff. Dr. Hayne enlisted the services of his business partner, Dr. Michael West, a now disgraced forensic odontologist, to examine the alleged bite marks.[63] Dr. West obtained a mold of Mr. Duncan's teeth and used his "direct comparison technique," a process in which he would push and scrape dental molds onto the victim's body.[64] Video tapes of his examination show him pushing Mr. Duncan's mold onto Haley's left elbow and right cheek, thereby creating the "bite marks" that he claimed were created by Mr. Duncan's teeth at the time of Haley's death.[65]

As a result of the "experts'" analysis, charges against Mr. Duncan were upgraded to capital first-degree murder.[66]

At trial, the State kept the videotape of Dr. West fabricating the "bite marks" from the jury and did not call him to testify. Instead, a dentist, who had not seen the videotape, testified for the State that Mr. Duncan's teeth had created the bite marks on Haley's body.[67] The State's jailhouse informant, Michael Cruse, testified under oath that Mr. Duncan had confessed to him - in front of at least ten other prisoners - to the assault and murder in the brief period they had shared a cell.[68] The State withheld evidence that Mr. Cruse sought leniency for the charges he faced in exchange for testifying against Mr. Duncan.

Although there was no blood or semen found in the bathtub or on Haley's body, Dr. Hayne, whose report was never offered as evidence at trial, testified that he observed injuries that indicated Haley had been sexually assaulted. He ruled that forcible drowning was the only possible explanation for her death.[69] Mr. Ducan's trial attorneys failed to introduce the likely explanation for Haley's death: medical complications from a prior skull fracture, which made her vulnerable to seizures. Weeks prior to the drowning, Haley had suffered the injury as a result of a chest of drawers that fell on her while she was climbing it.[70] Doctors warned the child's mother not to leave Haley unattended, especially in a bathtub, due to the increased

[63] Id. at 797 ("...Dr. Hayne's autopsy findings changed the direction of the investigation when he identified marks he suspected to be bite marks and referred the case to Dr. West, whose work has since been widely discredited."); Id. at 787 ("Professor Carrington also testified about the working relationship between Dr. Hayne and Dr. West, explaining that, as a matter of practice, Dr. Hayne would frequently perform an autopsy, note some sort of "pattern injury," then refer the case to Dr. West for his expertise in bite mark "matching" through his "direct comparison" method or videotape enhancement. He testified that their working relationship was "common knowledge" and that both had financial incentives to continue that relationship."); The Innocence Project, *Levon Brooks Exonerated in Mississippi, Forensic Reforms Underway,https://innocenceproject.org/news/levon-brooks-exonerated-in-mississippi-forensic-reforms-underway/*

[64] State v. Duncan, 437 So.3d 779, 787–88 (La., 2026)

[65] *State v. Duncan*, 437 So. 3d 779, 797 (La., 2026)

[66] Id. at 784

[67] Id. at 788–89

[68] Id. at 786

[69] Id. at,785–86

[70] Id. at 793–94

risk of seizure in warm water.

On April 7, 1998, a jury found Mr. Duncan guilty of first-degree murder and sentenced him to death.[71] Mr. Duncan always maintained his innocence and continuously challenged his conviction.

In 2022, a new innocence statute was passed in Louisiana that allowed the introduction of new evidence.[72] The Innocence Project joined Mr. Duncan's legal team and they were granted an evidentiary hearing in the 4th Judicial District Court of Ouachita Parish. At the six-day hearing, Mr. Duncan presented evidence demonstrating that the "bite mark" evidence had been manufactured by Dr. West and, moreover, the field of bite mark evidence has been entirely discredited since then.[73] Two board-certified forensic pathologists testified that Haley likely drowned as a result of a seizure, and that she had not been sexually assaulted. The observations made by Dr. Hayne that led to that conclusion are understood by modern science to be non-abusive injuries.[74]

Evidence was also presented at the hearing showing that Drs. Hayne and West had been exposed as frauds since the time of trial.[75] The men are jointly responsible for at least nine wrongful convictions, including four death penalty cases.[76] Further undermining his credibility, it was discovered that Dr. Hayne was conducting nearly 1,200 autopsies a year at the time of the case. The National Association of Medical Examiners will not certify a doctor who performs more than 250 autopsies annually.[77] Testimony by Det. Sasser, the State's only witness at the hearing, also contradicted the State's theory. He testified that the physical evidence collected during the investigation was consistent with Mr. Duncan's statement to the police the day he was arrested and showed no indication of blood or bleeding anywhere in the house.[78] Finally, the defense team tracked down a witness who was incarcerated with Mr. Duncan and Mr. Cruse at the time of Mr. Duncan's alleged confession. He provided an affidavit acknowledging that there had never been a confession.[79]

On May 19, 2025, the district court found that Mr. Duncan had proven his factual innocence.[80] Four months later, Mr. Duncan was granted bond and released after spending 27 years on Angola's death row. On June 29, 2026, the Louisiana

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[71] Id. at 786
[72] La. Code Crim. Proc. Ann. art. 926.2
[73] State v. Duncan, 437 So.3d 779, 789 (La., 2026)
[74] Id. at 790–92
[75] Id. at 787 ("Professor Carrington testified that later investigations and proceedings have linked Dr. Hayne and Dr. West to unethical business practices, false or misleading representations about qualifications, and a record of at least six wrongful convictions connected to their forensic work since Duncan's 1994 trial.")
[76] The Innocence Project, *Jimmie 'Chris' Duncan is released after 27 years on Louisiana's death row*, https://innocenceproject.org/news/jimmie-chris-duncan-is-released-after-27-years-on-louisianas-death-row/
[77] State v. Duncan, 437 So.3d 779, 787 (La., 2026)
[78] Id. at 798
[79] Id. at 792
[80] Id. at 793

Supreme Court unanimously affirmed the district court's finding. [81]

34. **Robert Wallace Lyons:** On September 22, 1989, Lori Stabenow, her brother Leon Elliot, and Mr. Elliot's girlfriend were staying at the Stage Stop Inn in Eugene, Oregon. That evening, Robert Lyons joined a gathering in the group's room, and they socialized over drinks. Around 11:30 p.m., a disagreement between Ms. Stabenow and Mr. Elliot broke up the party. Mr. Elliot and Mr. Lyons left the motel and returned late that night.[82] Upon his return, Mr. Lyons went to Ms. Stabenow's room to apologize for causing tension between her and her brother. He found her door ajar and, inside, he found her lying on the floor. Assuming she had passed out, he moved her onto her bed. While in her room, he unknowingly dropped his wallet.[83]

    The next morning, Mr. Lyons went to the inn's manager, and told her that he left his wallet in Ms. Stabenow's room and inquired whether she was awake. The manager called Ms. Stabenow's room, but there was no answer. Later that day, the manager and Mr. Elliot's girlfriend went to Ms. Stabenow's room and noticed that the door frame was broken. Inside, they discovered Ms. Stabenow's body, partially unclothed, with a black eye and other injuries.[84] She had been strangled to death.[85] The police found Mr. Lyons's wallet at the foot of the bed, and Mr. Lyons was subsequently arrested and charged with murder. While Mr. Lyons was in jail, Dr. Worthington, a local dentist, created wax molds of his teeth. Police took the mold to Ms. Stabenow's room, where her body remained, and placed it directly onto her body and ultimately claimed Mr. Lyons's teeth had created a "bite mark" on her body.[86]

    At Mr. Lyons's 1990 trial, there was no eyewitness testimony nor was there physical evidence on his clothes, room, or body that connected him to the crime. The state's case rested on circumstantial evidence, a DNA "match" to the alleged "bite mark" (which was later revealed to be misleading[87]), microscopic hair matching[88], and bite mark comparison testimony by Dr. Lowell Levine, a forensic

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[81] Id. at 799–800
[82] State v. Lyons, 324 Or. 256, 258 (Or.,1996)
[83] Haleigh Kochanski and Bayla Orton, Judge Vacates Lane county murder conviction based on Bitemark analysis The Register Gaurd (2026), https://www.registerguard.com/story/news/courts/2026/06/24/robert-lyons-murder-conviction-vacated-by-bitemark-law/90651284007/?gnt-cfr=1&gca-cat=p&gca-uir=true&gca-epti=z115001p002250c002250e009225v115001d--50--b--50--&gca-ft=168&gca-ds=sophi (last visited Oct 30, 2026).
[84] State v. Lyons, 124 Or.App. 598, 601 (Or.App.,1993)
[85] Id.
[86] State of Oregon v. Robert Wallace Lyons, No. 108908273, (Or. Cir. Lane Cty)
[87] Id ("It is probable that some of Mr. Lyons' saliva was transferred to the impression and possible that some of Mr. Lyons' saliva was transferred from the impression to the model…. It is possible…that the model of Mr. Lyons' teeth was place on the bitmarks prior to the swab samples being collected from the bitemarks, thereby contaminating the swabs.")
[88] The Innocence Project, *The Misapplication of Forensic Science, https://innocenceproject.org/misapplication-of-forensic-science/*

odontologist who was also responsible for two other wrongful convictions.[89] Dr. Levine compared Mr. Lyons's wax dental molds with the injuries on Ms. Stabenow's body and testified that there "was no doubt that the person who made the wax mold is the same person whose teeth left marks on the victim's body."[90] The jury found Mr. Lyons guilty of aggravated murder, murder, and first-degree burglary and sentenced him to life in prison without the possibility of parole. Mr. Lyons maintained his innocence.

Post-conviction investigation revealed that the dental molds taken from Mr. Lyons and placed directly on the victim's body likely transferred Mr. Lyons's saliva onto the body before forensic examiners swabbed the injury. This new evidence left the so-called bite mark match as the only evidence against Mr. Lyons. On April 7, 2026, Oregon's Governor signed Senate Bill 1515, which took effect immediately and opened new pathways for incarcerated people to challenge convictions based on junk science.[91] Under the new bill, the Circuit Court of the State of Oregon, for the County of Marion, granted Mr. Lyons post-conviction relief, overturning the conviction and granting Mr. Lyons a new trial. All parties concluded that had the bite mark evidence and testimony not been admitted, the result of Mr. Lyons's trial would have been different. After 37 years, Mr. Lyons's conviction was vacated by the Circuit Court on June 8, 2026.[92]

[89] The Innocence Project, Keith Allen Harward, http://www.innocenceproject.org/cases/keith- allenharward ("At trial, the prosecution rested mainly on the testimony of two forensic dentists, Lowell Levine and Alvin Kagey, who claimed that Harward's teeth matched photos of the bite mark left on the female victim… Harward was convicted of capital murder but was spared the death penalty by the jury"); Burke v. Town of Walpole, 405 F.3d 66, 73 (1st Cir. 2005); ("[Dr. Levine] He has also determined with reasonable scientific certainty that [they] were made by Edmund Burke"); The Innocence Project, *Cases Where DNA Revealed that Bite Mark Analysis Led to Wrongful Arrests and Convictions,* https://innocenceproject.org/news/cases-where-dna-revealed-that-bite-mark-analysis-led-to-wrongful-arrests-and-convictions/ ("DNA taken from saliva from the bite mark was tested and Burke was released.")

[90] State v. Lyons, 324 Or. 256, 259 (Or.,1996)

[91] Or. S.B. 1515, 83d Leg. Assemb., Reg. Sess. (2026).

[92] Robert Wallace Lyons v. Corey Fhuere, General Judgment Granting Post-Conviction Relief, No. 24CV30882, 1-2 (Or. Cir. Marion Cty., 2026)

DESCRIPTIONS OF WRONGFUL INDICTMENTS BASED ON BITE MARK EVIDENCE

1. **Dale Morris, Jr.:** In 1997, Dale Morris, Jr., was arrested based on bite mark analysis matching his dentition to a mark found on a nine-year-old murder victim, Sharra Ferger. Morris was a neighbor to the little girl, who had been found stabbed, sexually assaulted, and bitten in a field near her Florida home. Board-certified ABFO Diplomates Dr. Richard Souviron and Dr. Kenneth Martin agreed that the bite marks on the girl were a probable match to Morris. Morris spent four months in jail until DNA tests proved his innocence. Highlighting the importance of the bite mark evidence to the police's decision to arrest Morris, Detective John Corbin said that Morris "was probably one of our least likely suspects in the neighborhood, but through the forensics that we conducted in the investigation he was linked to the crime."[93]

2. **James Earl Gates:** In April 1997, prosecutors from Humphreys County, Mississippi, arrested James Earl Gates for the capital murder of his then-girlfriend. Gates' indictment rested solely on the purported match between a bite mark found on the victim and Gates' teeth. Dr. Steven Hayne claimed to have found bite marks on the victim while conducting an autopsy, and forensic odontologist Dr. Michael West confirmed the marks were bites and concluded that they matched Gates' dentition. Gates spent several months in jail awaiting trial before nascent DNA technology excluded him from a profile obtained from scrapings from the victim's fingernails. Prosecutors subsequently dismissed the case. In 2012, the Mississippi Crime Lab, at the request of Humphreys County law enforcement, engaged in additional DNA testing of the biological material collected at the murder scene. Because of advancements in technology, the subsequent testing yielded an identifiable profile of an individual who had, in the initial stages of investigation, been a prime suspect. That individual had since been convicted of another homicide.[94]

3. **Edmund Burke**: In 1998, Edmund Burke was arrested for raping and murdering a 75-year-old woman. The victim had bite marks on her breasts, and board- certified ABFO Diplomate Dr. Lowell Levine "formed an initial opinion that Burke could not be excluded as the source of the bite marks" but asked to see enhanced photos before rendering a final opinion. After examining the enhanced photos, Dr. Levine concluded that Burke's teeth matched the bite mark on the victim's left breast to a "reasonable degree of scientific certainty." DNA testing of saliva taken from the bite mark site excluded Burke as the source of the DNA, however, and prosecutors

[93] Ian James & Geoff Dougherty, *Suspect in Girl's Murder Freed after Four Months*, St. Petersburg Times, Feb. 28, 1998, at 1A, http://www.wearethehope.org/pdf/times_02_28_1998.pdf; The Innocence Project, *Cases Where DNA Revealed That Bite Mark Analysis Led to Wrongful Arrests and Convictions*, *supra* n.9; Flynn McRoberts and Steve Mills, *From the Start, a Faulty Science*, Chicago Tribune, Oct. 19, 2004, https://www.chicagotribune.com/investigations/chi-041019forensics-story.html.

[94] Radley Balko, *Solving Kathy Mabry's Murder: Brutal 15-Year-Old Crime Highlights Decades-Long Mississippi Scandal*, Huffington Post, Nov. 7, 2013, http://www.huffingtonpost.com/2013/01/17/kathy-mabry-murder-steven-hayne-michael-west_n_2456970.html.

dropped the case against him. The person who actually committed the crime was later identified when DNA from the bite mark was matched to a profile in the national DNA database. Dr. Levine remains one of the few full-time forensic odontologists in the nation and is regarded as one of the field's top practitioners.[95]

4. **Anthony Otero:** In 1994, Anthony Otero was charged with larceny and the first-degree murder and rape of a 60-year-old woman, Virginia Airasolo, in Detroit, Michigan. A warrant for Otero's arrest was issued after ABFO Diplomate Dr. Allan Warnick claimed to have matched the bite marks on the victim's body to Otero's dentition. At the preliminary hearing on December 13, 1994, Dr. Warnick testified that Otero was "the only person in the world" who could have caused the bite marks on Airasolo's body.

   In January 1995, DNA testing excluded Otero as the source of the DNA found on the victim and he was released in April, after spending five months in jail. Following Otero's release, a second forensic odontologist, ABFO Diplomate Dr. Richard Souviron, concluded that the marks on the victim were consistent with human bite marks but were too indistinct to be used to identify a suspect. Ultimately, the charges against Otero were dismissed.[96]

5. **Johnny Bourn:** In 1992, Johnny Bourn was arrested for the rape and murder of an elderly Mississippi woman after Dr. Michael West matched a bite mark on the victim to Bourn. Bourn was imprisoned for 18 months, despite hair and fingerprint evidence pointing to another suspect. Ultimately, Bourn was released when he was excluded as a suspect by DNA testing performed on fingernail scrapings from the victim, but not before he had spent about one and a half years in jail awaiting trial.[97]

6. **Dane Collins:** In 1989, Dane Collins was arrested and charged with the rape and murder of his 22-year-old stepdaughter, based largely on a bite mark comparison performed by ABFO Diplomate Dr. Homer Campbell. The Sante Fe, New Mexico, District Attorney declared his intent to seek the death penalty. Despite evidence that Collins could not produce sperm and therefore could not have been the perpetrator, the D.A. gave several public interviews stating that while there was not enough evidence to try the case, he believed Collins was guilty of the crime. Fifteen years later, a man named Chris McClendon was matched to DNA found on the victim. He pled "no contest" to the crime in exchange for describing how he had committed the rape and murder. (McClendon was already serving life in prison

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[95] *Burke v. Town of Walpole*, 405 F.3d 66, 73 (1st Cir. 2005); Radley Balko, *How the Flawed 'Science' of Bite Mark Analysis Has Sent Innocent People to Prison*, Washington Post, Feb. 13, 2015, https://www.washingtonpost.com/news/the-watch/wp/2015/02/13/how-the-flawed-science-of-bite-mark-analysis-has-sent-innocent-people-to-jail/.

[96] The Innocence Project, *Cases Where DNA Revealed That Bite Mark Analysis Led to Wrongful Arrests and Convictions*, *supra* n.9; *Otero v. Warnick*, 614 N.W.2d 177 (Mich. Ct. App. 2000).

[97] Hansen, *supra* n.14; *Michael West Responds*, The Agitator, Part 167, Mar. 1, 2009, http://www.theagitator.com/2009/03/01/michael-west-responds/; Paul C. Giannelli and Kevin C. McMunigal, *Prosecutors, Ethics, and Expert Witnesses*, 76 Fordham L. Rev. 1493 (2007).

after he was convicted of kidnapping and raping a 24-year-old woman.)[98]

7. **Ricky Amolsch:** Ricky Amolsch's girlfriend, Jane Marie Fray, was found dead on August 23, 1994. She had been stabbed 22 times and had an electrical cord wrapped around her neck. The arrest warrant for Amolsch was based on a finding by Dr. Allan Warnick that a bite mark that had been found on the victim's left ear was "highly consistent" with Amolsch's dentition. Charges were not dropped until 10 months later when the eyewitness who had identified Amolsch's van at the crime scene was himself arrested for raping another woman in the same trailer park. Amolsch was jailed for 10 months until his trial. During that time, he lost his home, savings, and children.[99]

[98] Jeremy Pawloski, *Plea in '89 Slaying Eases Parents' Pain*, Albuquerque Journal Aug. 14, 2005, http://abqjournal.com/news/state/380765nm08-14-05.htm; Jeremy Pawloski, *State Police Say DNA Ties Felon to Slaying*, Albuquerque Journal, May 1, 2004, at 2, https://www.newspapers.com/image/469634168/?terms=State%20Police%20Say%20DNA%20Ties%20Felon%20to%20Slaying&match=1.

[99] Jim Fisher, *Forensics Under Fire: Bite Mark Evidence,* http://jimfisher.edinboro.edu/forensics/fire/mark.html; Katherine Ramsland, *Bite Marks as Evidence to Convict – Whose Bite Mark is it, Anyway?*, Crime Library, https://www.crimelibrary.org/criminal_mind/forensics/bitemarks/5.html.

Statistical Analysis of Forensic Odontologist Involvement in Cases of Wrongful Bite Mark Convictions and Indictments

The misapplication of forensic sciences is a leading contributing factor to wrongful conviction,[100] and of the unvalidated techniques that have contributed to wrongful convictions and indictments later overturned through DNA testing, bite mark comparisons pose an acute threat to the reliability and fairness of the criminal justice system. A total of 28 forensic dentists were involved in the 41 known wrongful convictions and indictments secured through the use of bite mark comparison evidence.[101] Approximately 79%, or 22, of those dentists were Diplomates of the American Board of Forensic Odontology at the time of their relevant casework, and 92% of the wrongful bite mark conviction and indictment cases involved at least one board-certified dentist.[102] The raw data is presented below in Chart 1; ABFO Diplomates are highlighted in yellow. A brief statistical summary is offered in Chart 2.

Chart 1: Wrongful Bite Mark Convictions and Indictments by Odontologist and ABFO Diplomate Status

Forensic Odontologist	Wrongful Convictions and Indictments	ABFO Diplomate Status
1. Lowell Levine	-Keith Harward -Edmund Burke -Robert Wallace Lyons	Diplomate
2. Alvin Kagey	-Keith Harward	Diplomate
3. Lowell Johnson	-Robert Lee Stinson	Diplomate
4. Raymond Rawson	-Robert Lee Stinson -Ray Krone	Diplomate
5. Ira Titunik	-Gerard Richardson -Edmund Burke	Diplomate
6. Robert Barsley	-Willie Jackson	Diplomate
7. Edward Mofson	-Roy Brown	Diplomate
8. Homer Campbell	-Calvin Washington -Joe Sidney Williams -Steven Chaney -Dane Collins	Diplomate

[100] The Innocence Project, *Unvalidated or Improper Forensic Science*, http://www.innocenceproject.org/causes/unvalidated-or-improper-forensic-science/.
[101] Nine forensic odontologists participated in multiple cases of wrongful conviction and/or indictment. Conversely, several cases involved multiple dentists.
[102] *American Board of Forensic Odontology Diplomate Information,* Aug. 2017, http://abfo.org/wp-content/uploads/2017/05/ABFO-Diplomate-Information-revised-August-2017.pdf.

9. Jim Hales	-Steven Chaney	Diplomate
10. Harvey Silverstein	-James O'Donnell	Diplomate
11. Michael West	-Levon Brooks -Kennedy Brewer -Anthony Keko -Johnny Bourn -James Earl Gates -Sherwood Brown -Eddie Lee Howard -Leigh Stubbs -Tammy Vance -Jimmie "Chris" Duncan	Diplomate
12. Thomas David	-John Kunco -Sheila Denton	Diplomate
13. Michael Sobel	-John Kunco	Diplomate
14. Allan Warnick	-Michael Cristini -Jeffrey Moldowan -Ricky Amolsch -Anthony Otero -Gilbert Poole	Diplomate
15. Pamela Hammel	-Michael Cristini -Jeffrey Moldowan	Diplomate
16. John Kenney	-Harold Hill -Dan Young, Jr.	Diplomate
17. Norm Sperber	-William Richards	Diplomate
18. Richard Souviron	-Dale Morris, Jr. -Gary Cifizzari -Robert DuBoise	Diplomate
19. Kenneth Martin	-Dale Morris, Jr.	Diplomate

20. Lester Luntz	-Alfred Swinton	Diplomate
21. Harry Mincer	-Sherwood Brown	Diplomate
22. Stanley Schwartz	-Gary Cifizzari	Diplomate
23. Russell Schneider	-Bennie Starks	Not board certified
24. Carl Hagstrom	-Bennie Starks	Not board certified
25. Constantine (Gus) Karazulas	-Crystal Weimer -Alfred Swinton	Not board certified
26. Richard Glass	-Greg Wilhoit	Not board certified
27. Keith Montgomery	-Greg Wilhoit	Not board certified
28. Anthony Captline	-Gary Cifizzari	Not board certified

Chart 2: Statistical Summary of Cases of Wrongful Bite Mark Conviction and Indictment

Total Wrongful Bite Mark Convictions and Indictments:	41
Total Years of Wrongful Incarceration (approx.):	556
Total Wrongful Bite Mark Death Sentences:	5
Forensic Dentists Involved in Wrongful Bite Mark Convictions and Indictments:	28
ABFO Diplomates Involved in Wrongful Bite Mark Convictions and Indictments:	22
Non-Board Certified Odontologists Involved in Wrongful Bite Mark Convictions and Indictments Cases:	6
Percentage of Dentists Responsible for Wrongful Bite Mark Conviction and/or Indictments With ABFO Diplomate Status:	78.6% (22 of 28)
Percentage of Wrongful Bite Mark Convictions and Indictments With ABFO Diplomate Involvement:	92.3% (38 of 41)