

[Cite as *State v. Prade*, 2014-Ohio-1035.]

STATE OF OHIO            )  
                                  )ss:  
COUNTY OF SUMMIT    )

IN THE COURT OF APPEALS  
NINTH JUDICIAL DISTRICT

STATE OF OHIO

C.A. No.     26775

Appellant

v.

DOUGLAS PRADE

APPEAL FROM JUDGMENT  
ENTERED IN THE  
COURT OF COMMON PLEAS  
COUNTY OF SUMMIT, OHIO  
CASE No.     CR 98 02 0463

Appellee

DECISION AND JOURNAL ENTRY

Dated: March 19, 2014

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WHITMORE, Judge.

{¶1} Appellant, the State of Ohio, appeals from the judgment of the Summit County Court of Common Pleas, granting Appellee, Douglas Prade’s, petition for post-conviction relief. This Court reverses.

I

{¶2} On November 26, 1997, Dr. Margo Prade was severely bitten on the underside of her upper, left arm, shot six times at close range, and left to die in the driver’s seat of her Dodge Grand Caravan. The murder took place in the back parking lot of Margo’s medical office. Security footage from the adjacent car dealership, while exceedingly poor in quality, captured certain details surrounding the murder. Specifically, the footage depicted: (1) a small car waiting in the medical office parking lot; (2) Margo’s van entering the lot; (3) the small car repositioning itself while Margo parks her van alongside the fence separating her lot from the car dealership’s lot; (4) a single, unidentifiable person exiting the small car, walking to the passenger’s side of

Margo's van, and entering it; and (5) that same person exiting the van, returning to the small car, and driving away a short while later. Margo never exited her van. Rather, forensic evidence showed that her killer entered the van on the front passenger's side and murdered her while the two were inside the van. Margo's body was discovered more than an hour after her murder by a medical assistant from her office.

{¶3} In 1998, Prade, Margo's ex-husband and an Akron Police Department Captain, was indicted for her aggravated murder. He was also indicted for the possession of criminal tools and the interception of Margo's wire, oral, or electronic communications. The interception charge stemmed from evidence that he had used a recording device to tape phone calls made or received at the marital residence for a substantial amount of time, both before and after Prade and Margo's divorce. One critical aspect of the case involved the bite mark to Margo's left arm. The bite mark left an impression on Margo's lab coat as well as a bruise on her arm. Photographs of the bite mark were taken and Margo's lab coat was sent to the FBI for DNA testing.

{¶4} A serologist technician from the FBI cut out the bite mark section of Margo's lab coat ("the bite mark section"). The bite mark section was bigger than the bite mark itself and measured approximately two and a half inches wide and between one to two inches high.<sup>1</sup> Subsequently, a DNA examiner made three cuttings from inside the bite mark. The cuttings were all approximately a quarter inch by a quarter inch in size and were taken from the left-hand side, middle, and right-hand side of the bite mark. In July 1998, the FBI reported that it had conducted polymerase chain reaction testing ("PCR testing") on the three cuttings and, due to the

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<sup>1</sup> Because the cutting was not symmetrical, one side of the bite mark section was higher than the other side.

enormous amount of Margo's DNA that was present on the cuttings, only found DNA that was consistent with Margo's DNA.

{¶5} Once the FBI finished with the bite mark section, it was sent to the Serological Research Institute ("SERI") for further testing. To see if the bite mark section contained any saliva (an expected source of epithelial cells for DNA testing), SERI mapped the entire bite mark section for amylase, a component of saliva. The initial mapping showed the probable presence of amylase. Because dispositive confirmative testing was necessary, the scientists at SERI made three additional cuttings of the bite mark section at the three areas indicating probable presence of amylase. The cuttings were approximately a quarter inch by an eighth of an inch and were taken from the middle of the rightmost side, the top of the leftmost side, and the bottom of the leftmost side of the bite mark. Despite the initial mapping results, the confirmatory test indicated that the cuttings were negative for amylase. SERI then performed PCR testing on the cuttings and confirmed the FBI's finding that the only DNA found was consistent with Margo's profile. SERI reported its findings in September 1998.

{¶6} At trial, the jury heard a substantial amount of evidence about Margo and Prade's relationship as well as the results of the DNA testing. Additionally, the jury heard from three dental experts tendered for the purpose of offering their expert opinion on the bite mark. Of the State's two experts, one testified that the bite mark was consistent with Prade's dentition while the other testified that Prade was the biter. Meanwhile, the defense expert testified that Prade lacked the ability to bite anything forcefully due to the fact that he wore a poorly fitted upper denture, which easily released under pressure. The jury also heard from two eyewitnesses who placed Prade at the scene around the time of the murder. After several weeks of trial and the presentation of 53 witnesses, including Prade himself, the jury found Prade guilty on all counts.

The trial court sentenced Prade to life in prison. Prade then appealed, and this Court affirmed his convictions. *State v. Prade*, 139 Ohio App.3d 676 (9th Dist.2000).

{¶7} While serving his life sentence, Prade filed two applications for DNA testing pursuant to R.C. 2953.71, et seq. Although DNA evidence had been admitted at trial, both of Prade's applications sought additional testing due to scientific advancements that had occurred since the trial. Specifically, Prade sought Y chromosome short tandem repeat ("Y-STR") testing, which, unlike PCR testing, allows for male DNA profiling when a small amount of male DNA has been mixed with an overwhelming amount of female DNA. The second application for testing ultimately resulted in the issuance of *State v. Prade*, 126 Ohio St.3d 27, 2010-Ohio-1842. In *Prade*, the Ohio Supreme Court held that "definitive" prior DNA testing, within the meaning of R.C. 2953.74(A), had not occurred in this case due to the inherent limits of PCR testing. *Prade* at ¶ 15-23. Accordingly, the Supreme Court remanded the matter to the trial court for it to conduct an analysis under R.C. 2953.74(B) and 2953.71(L) and "consider whether new DNA testing would be outcome-determinative." *Id.* at ¶ 28-30.

{¶8} On remand, both parties briefed the issue of whether new DNA testing would be outcome-determinative in this matter. The trial court determined that there was "a strong probability [] that no reasonable juror would find [Prade] guilty of aggravated murder" if a DNA exclusion result could be obtained because the exclusion result, when analyzed in the context of all the admissible evidence in the case, would "compromise[] the foundation of the State's case." Consequently, the court granted Prade's application for additional DNA testing.

{¶9} After the court granted the application, the bite mark section was sent to DNA Diagnostics Center ("DDC"). DDC also received reference standards from both Margo and Prade and five DNA extracts that the FBI had retained. Three of the extracts were from

swabbings of the three cuttings made by the FBI in 1998. The other two extracts, labeled “Q6” and “Q7,” also were swabbings of the bite mark, but it was unclear to all involved whether they were swabbings of the bite mark section or swabbings taken from the actual skin on Margo’s arm during the autopsy. In any event, DDC performed Mini-Short Tandem Repeat (“Mini-STR”) testing on all the extracts. The three extracts from the three FBI cuttings, as well as the extract labeled “Q6,” produced no DNA at all. The extract labeled “Q7” produced a partial profile from which Margo could not be excluded, as well as a Y (male) chromosome at the Amelo locus. Although the Y chromosome could only have come from a male, DDC was unable to perform Y-STR testing on the “Q7” sample because the extract was consumed during the testing process. DDC then took additional cuttings from the bite mark section.

{¶10} DDC’s first cutting, labeled 19.A.1, measured no greater than seven-eighths of an inch wide and high, but also overlapped the cuttings the FBI had made in two places. Accordingly, the cutting (19.A.1) had two holes in it because those portions had already been excised by the FBI. The cutting (19.A.1) encompassed the middle and right-hand side of the bite mark. When DDC performed Y-STR testing on 19.A.1, the test uncovered a single, partial male profile that did not match Prade’s profile. Consequently, DDC concluded that Prade was excluded as the source of the partial male profile it found in 19.A.1. Seeking to gain a more complete profile, DDC then made three additional cuttings from areas surrounding the left-hand, top, and right-hand edges of the bite mark and combined the DNA extract from those cuttings (labeled 19.B.1) with remaining DNA extract from 19.A.1. DDC labeled the combined extraction 19.A.2. The Y-STR testing on 19.A.2 uncovered at least two partial male profiles. DDC determined, however, that neither partial profile matched Prade’s profile. Consequently,

DDC concluded that Prade was excluded as the source of the partial male profiles it found in 19.A.2. DDC reported its findings in January 2012.

{¶11} After DDC reported its exclusion results, the State requested that further testing be conducted by the Bureau of Criminal Identification and Investigation (“BCI”). The trial court agreed to permit the additional testing, and the bite mark section was sent to BCI. BCI took a cutting from the bite mark section directly next to DDC’s cutting, nearest the middle of the bite mark. The cutting, labeled 111.1, was then swabbed on its front and back side to create 111.2 and 111.3, respectively. BCI performed Y-STR testing on all three items. On the cutting itself (111.1), BCI was unable to obtain any male profile. On the two swabbings of the cutting (111.2 and 111.3), the testing uncovered partial male profiles, but BCI concluded that the profiles were insufficient for comparison purposes because they each returned results on less than three of the sixteen loci used to conduct a Y chromosome profile.

{¶12} BCI also performed Y-STR testing on several different areas of Margo’s lab coat after concerns arose that the lab coat might contain any number of profiles, due to contamination. BCI took four additional cuttings of the lab coat at: (1) the area just outside the bite mark section; (2) the left forearm area; (3) the right arm area in the same spot where the bite mark had occurred on the left; and (4) the back area, nearest the bottom of the coat. The Y-STR testing performed on all four cuttings did not uncover any male profile, partial or otherwise. BCI reported all of its results in June 2012.

{¶13} After the completion of all the testing, Prade filed his petition for post-conviction relief (“PCR”) and, in the alternative, a motion for a new trial. The State filed a brief in opposition, and the court held a hearing on the matter. Numerous experts were presented at the hearing and addressed the topics of the DNA results as well as the reliability of both bite mark

identification testimony and eyewitness testimony.<sup>2</sup> After the hearing, both parties also filed post-hearing briefs. On January 29, 2013, the trial court issued its decision granting Prade's PCR petition and, in the alternative, his motion for new trial. Prade was discharged based upon the court's finding of actual innocence.

{¶14} The State now appeals from the trial court's judgment and raises a single assignment of error for our review.

## II

### Assignment of Error

THE COURT ERRED IN GRANTING APPELLEE PRADE A DISCHARGE UNDER R.C. 2953.23 AND R.C. 2953.21.

{¶15} In its sole assignment of error, the State argues that the trial court erred by granting Prade's PCR petition and ordering his discharge.<sup>3</sup> We agree.

{¶16} Under R.C. 2953.23(A)(2), a trial court may entertain an untimely or successive PCR petition only if:

[t]he petitioner was convicted of a felony, the petitioner is an offender for whom DNA testing was performed \* \* \* and analyzed in the context of and upon consideration of all available admissible evidence related to the inmate's case \* \*

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<sup>2</sup> As set forth below, the PCR statute requires the results of new DNA testing to be "analyzed in the context of and upon consideration of all *available* admissible evidence related to the inmate's case." (Emphasis added.) R.C. 2953.23(A)(2). Neither party below objected to the court's consideration of new expert evidence on subjects other than DNA (i.e., the subjects of bite mark identification and eyewitness identification testimony) on the basis that the new evidence was not "available" at the time of Prade's trial. Indeed, both parties actually presented expert testimony regarding bite mark identification. This Court takes no position as to whether the additional evidence the court accepted constitutes "available" evidence within the meaning of the PCR statute. Because neither party objected to the evidence introduced below and because neither party questions the propriety of that evidence on appeal, this Court takes no position on the issue of whether it was proper for the trial court to accept new expert evidence that was unrelated to the DNA results.

<sup>3</sup> The trial court's alternative ruling that Prade be granted a new trial in the event this Court reverses the PCR ruling is not at issue in this appeal.

\*, and the results of the DNA testing establish, by clear and convincing evidence, actual innocence of that felony offense \* \* \*.

The phrase “actual innocence”

means that, had the results of the DNA testing conducted \* \* \* been presented at trial, and had those results been analyzed in the context of and upon consideration of all available admissible evidence related to the person’s case \* \* \*, no reasonable factfinder would have found the petitioner guilty of the offense of which the petitioner was convicted \* \* \*.

R.C. 2953.21(A)(1)(b). “Clear and convincing evidence requires a degree of proof that produces a firm belief or conviction regarding the allegations sought to be proven.” *State v. Gunner*, 9th Dist. Medina No. 05CA0111-M, 2006-Ohio-5808, ¶ 8. “It is intermediate, being more than a mere preponderance, but not to the extent of such certainty as is required beyond a reasonable doubt as in criminal cases.” *Cross v. Ledford*, 161 Ohio St. 469, 477 (1954).

{¶17} Initially, we pause to consider the appropriate standard of review in this matter. There is no question that, had Prade’s petition been timely filed under R.C. 2953.21, this Court would review the trial court’s judgment for an abuse of discretion. *See State v. Gondor*, 112 Ohio St.3d 377, 2006-Ohio-6679, ¶ 58 (“We hold that a trial court’s decision granting or denying a [PCR] petition filed pursuant to R.C. 2953.21 should be upheld absent an abuse of discretion \* \* \*.”). Because Prade’s petition was filed under R.C. 2953.23, however, the State argues that a de novo standard of review applies. According to the State, actual innocence is a question of law, as is the question of whether a trial court had the jurisdiction to review an untimely or successive PCR petition under R.C. 2953.23.

{¶18} The burden that a PCR petitioner must satisfy to have his untimely or successive petition considered under R.C. 2953.23(A)(2) is identical to the burden a timely petitioner must satisfy to have his petition granted under R.C. 2953.21(A)(1)(a). Both subsections rely upon the same definition of “actual innocence” and both require clear and convincing proof of actual

innocence with regard to DNA results that have been obtained pursuant to R.C. 2953.71, et seq. Compare R.C. 2953.21(A)(1)(a) with R.C. 2953.23(A)(2). It would make little sense for this Court to apply a de novo standard to one and an abuse of discretion standard to the other when both statutory subsections require the same showing. Moreover, this Court has only applied a de novo standard of review in PCR appeals in limited circumstances. This is not an appeal involving a procedurally defective PCR petition, such as one that is barred by res judicata or that fails to allege any of the grounds for relief set forth in R.C. 2953.23(A). Compare *State v. Childs*, 9th Dist. Summit No. 25448, 2011-Ohio-913, ¶ 9-12; *State v. Morris*, 9th Dist. Summit No. 24613, 2009-Ohio-3183, ¶ 5-9; *State v. Samuels*, 9th Dist. Summit No. 24370, 2009-Ohio-1217, ¶ 3-7. It is also not an appeal that requires this Court to engage in statutory interpretation. Compare *State v. Prade*, 9th Dist. Summit No. 24296, 2009-Ohio-704, ¶ 7-13, *rev'd*, 126 Ohio St.3d 27, 2010-Ohio-1842. Rather, this is an appeal from a petition that caused the trial judge to receive extensive evidence, to hold a hearing, to weigh the credibility of all the evidence, and to function in a gatekeeping role. See *Gondor* at ¶ 51-58. As such, we reject the State's argument that a de novo standard of review is the appropriate standard to apply here. This Court will review the trial court's decision to grant Prade's PCR petition for an abuse of discretion. See *State v. Cleveland*, 9th Dist. Lorain No. 08CA009406, 2009-Ohio-397, ¶ 11-27.

{¶19} Our decision in this matter necessarily entails a review of the evidence presented at the PCR hearing as well as the trial court's decision in this matter. Because actual innocence requires DNA results to be "analyzed in the context of and upon consideration of all available admissible evidence related to the person's case," however, this Court also must review all of the evidence presented at Prade's trial. See R.C. 2953.21(A)(1)(b). For contextual purposes, we

begin with the evidence presented at the trial, followed by the evidence submitted at the PCR stage and the trial court's decision in this matter.

### **The Trial Evidence**

{¶20} Prade and Margo met in 1974, when she was about 18 years old and he was about 28 years old. The two married in 1979 and had two daughters during the course of the marriage. Both achieved professional success while they were married, with Prade progressing through the ranks of the Akron Police Department and Margo eventually establishing her own medical practice. It was primarily Margo's income, however, that allowed the couple to enjoy a higher standard of living. Moreover, as time went on, it became clear to all involved that Prade and Margo's relationship was a troubled one.

{¶21} Lillie Hendricks, Margo's mother, testified that she and her daughter had a very close relationship and that Margo expressed to her on several occasions that she feared Prade. Margo described to Hendricks how Prade would turn physical during their arguments by pushing her head "way back" with his hand and using his hand to "push her nose in." Hendricks stated that she personally heard Prade and Margo arguing a few times, including once after the divorce when she heard Prade tell Margo, "[y]ou fat faced bitch, nobody wants you." According to Hendricks, Margo never indicated that she feared anyone other than Prade.

{¶22} Several other friends and associates of Margo's also testified at trial regarding Margo's fear of Prade. Brenda Weems, a friend of Margo's, testified that she wanted Margo and the children to stay with her on at least one occasion after Margo described a fight she had with Prade because it caused Weems to fear for Margo's safety. Weems stated that Margo feared Prade as did Dayne Arnold (Margo's niece), Frances Fowler (Margo's sister), Frances Ellison (Margo's friend and the wife of a fellow officer of Prade's), Joyce Foster (Margo's office

manager), and Donzella Anuszkiewicz (Margo's friend). Anuszkiewicz testified that, while Margo and Prade were still married, Prade would often show up in uniform when Margo went out to socialize with her friends. Anuszkiewicz stated that "[n]ormally fifteen minutes, half-hour after [Prade] would show up when we were out, \* \* \* [Margo] would tell me that she had to go." On one particular occasion, Anuszkiewicz observed Prade "really staring [Margo] down" while she was talking to another man. Arnold, Fowler, Ellison, and Anuszkiewicz all testified that they advised Margo to seek police intervention based on the things she described to them, but that Margo never did so.

{¶23} Annalisa Williams, Margo's divorce lawyer, testified that Margo first approached her about separating from Prade in 1993. Williams testified that Margo was interested in a separation rather than a divorce and had her draft a separation agreement on a few occasions. Williams stated that she sent Prade several drafts of separation agreements over the years, but that Prade never responded to them and Margo never wanted to follow through with the divorce. According to Williams, "[a]lmost every year after 1993 Margo would come in \* \* \* to[] say[] things aren't working out." Finally, in December 1996, Margo decided that she wanted a divorce. Williams testified that Margo had started seeing another man at the time, had started losing weight, and was "very happy" and ready "to have a new life and start all over."

{¶24} Al Strong testified that he began dating Margo in June 1996, before she and Prade divorced. Although Prade still lived with Margo at the time, Margo assured Strong that her relationship with Prade had been over for about two years and that she planned to divorce him. Directly after Margo filed for divorce, she and Strong attended the First Night event in Akron where one of Margo's daughters was scheduled to sing. Strong testified that Prade was also at the event and that, while the two had never met, Prade said "[h]ow are you doing, Al" when they

walked by each other. Further, Strong noticed Prade videotaping him at one point during the event. Strong testified that, during the course of his friendship and relationship with Margo, Margo was wary about speaking on the phone in her home because she felt that Prade might be taping her conversations.

{¶25} It was just after Christmas Day of 1996 when Margo filed for divorce. Williams testified that Margo and Prade came to her office on January 4, 1997, to discuss the last separation agreement that Williams had sent to Prade on Margo's behalf. Williams described Prade as "very agitated" during the meeting. She stated that Prade told her that she "probably had no idea that [Margo] was going around and behaving like a slut." Prade went on to say that "he could prove that [Margo] was an unfit mother" because she was "whoring around" and that he could take the house from her and obtain spousal support from her if that was what he chose to do. Further, Prade stated that he could not afford an attorney for the proceedings "because he [had] spent thousands of dollars \* \* \* having someone follow [Margo]." Williams testified that Margo kept her head down during the meeting and "was scared to death."

{¶26} Williams continued to handle Margo's divorce proceedings after Margo filed for divorce. Williams testified that Prade failed to respond to any of the court filings and never appeared at any of the proceedings. Consequently, Margo received an uncontested divorce in April 1997 and was awarded child support for her and Prade's two children. Even after the divorce, however, Williams testified that Prade continued to be uncooperative. Williams stated that Margo called her several times after the divorce to request her assistance in getting Prade to move out of the marital home. Additionally, Prade never signed the quitclaim deed for the marital home, as he was required to do by decree.

{¶27} Fowler, Margo's sister, testified that Prade remained at the marital home for several months after the divorce even though Margo did not want him there. When he finally did move out, Margo had all of the locks changed and put an alarm system on the house. Fowler testified that she, in particular, had advised Margo to get the locks changed and have a security system put in place on the house after Prade left. Nevertheless, there was testimony that Prade still had access to the house. Hendricks, Margo's mother, testified that, even after Margo changed the locks, Prade had his daughter's key. According to Fowler, she spoke with Margo in January 1997, and Margo was "frightened" and "very nervous."

{¶28} Foster, Margo's medical office manager, testified that Margo continued to have negative interactions with Prade after the divorce. Foster stated that Prade "harassed" Margo and that Margo was "very afraid for her life" as a result of their interactions. According to Foster, she discovered that Prade was coming to Margo's medical office at night in 1996 or 1997. Foster testified that she contacted the office's alarm company and learned that the office was frequently being accessed at night for one to three hours at a time. On one particular night, Foster drove to the office to see what was happening and saw Prade's city car in the parking lot.

{¶29} Autumnne Shaeffer testified that she often babysat Margo's children in the summer of 1997. By that time, Prade had moved out of the marital home. Shaeffer testified that Prade would call the home at least once a night on the nights when Margo went out. According to Shaeffer, Prade would ask her where Margo had gone and who she was with. If Shaeffer did not answer, Prade would then speak with his daughter and ask her the same questions. Shaeffer testified that Margo specifically instructed her not to tell Prade where she was if he called, but just to say that she had gone out.

{¶30} Ellison, Margo's friend and the wife of a fellow police officer of Prade's, testified that she spoke with Margo about her fear of Prade several times in the months preceding the murder. Ellison described one particular occasion when Margo told her that Prade had threatened her. In particular, Ellison testified that Margo told her Prade had called her a "fat bitch" and had "grabbed her by her neck and told her he'd kill her." After listening to Margo, Ellison stated that she advised Margo to buy a gun in case she needed to protect herself.

{¶31} In June 1997, Margo began to date Timothy Holston. Several individuals, including Holston, testified that Margo was excited about her relationship with Holston and that things quickly became serious between the two of them. Fowler, Margo's sister, testified that she spoke with Margo about Holston in November 1997 and Margo said the two were planning to marry. Holston testified that he and Margo had talked about having children, and that she wanted to learn about having a tubal ligation reversal so that she could have another child. Sandra Martin, the office manager at Northeastern Ohio Fertility Center, confirmed that Margo had scheduled a consultation for a reversal on November 29, 1997. Holston also testified that he and Margo had planned on having Thanksgiving together on November 27, 1997, so that he could be formally introduced to her family.

{¶32} As Margo's relationship with Holston blossomed, Margo and Prade continued to have issues. There was testimony that Prade came to Akron General Medical Center and had a verbal confrontation with Margo within a few weeks of her murder. Maria Vidikan testified that she worked at the hospital and knew that Margo came to the hospital every morning to do rounds. In late October or early November 1997, Vidikan saw an individual follow Margo into the doctor's lounge and heard Margo arguing with that person. Vidikan testified that, after

Margo was murdered, she saw Prade on the news and recognized him as the individual with whom Margo had argued at the hospital.

{¶33} There also was testimony that Margo planned on taking additional legal action against Prade in November 1997. Strong, who still had a relationship with Margo near the time of her death, testified that Margo became upset in November when her children related that Prade had denounced them in favor of his girlfriend and her son. According to Strong, her children's reaction convinced Margo that legal action was necessary. Strong testified that Margo intended to terminate her and Prade's joint custody arrangement and to seek an increase in child support. Williams, Margo's attorney, testified that one to two weeks before Margo's murder, Margo contacted her about seeking a child support modification. Williams sent Margo a confirmation letter about the modification on November 20, 1997, and indicated in the letter that she would file for the modification if Margo sent her the \$75 filing fee. Detective Russ McFarland testified that one of the items the police found inside Margo's purse on the day of her murder was a personal check to Williams for \$75.

{¶34} The weekend before Margo's murder, she and Holston took a trip to Las Vegas where Margo attended a conference and introduced Holston to her sister. Holston testified that Margo was in a "very joyful mood" that Saturday, but became "very upset" after she phoned home and learned that Prade was staying there in her absence. Foster, Margo's office manager, spoke with Margo when she returned from Las Vegas and also testified that Margo was "very upset" that Prade had stayed at the marital home while she was gone. According to Foster, Margo intended to speak with Prade about not staying at her home any more. Foster testified that Margo planned to have that conversation with Prade on November 25, 1997, the day before she was murdered.

{¶35} There was testimony at trial that, while Margo continued to enjoy financial success in the months before her death, Prade's financial outlook turned grim. Donald Corpora, the director of professional recruitment and human resources for Akron General Medical Center, testified that Margo's annual salary was \$125,000 a year at the time of her death. Meanwhile, Prade's annual salary was approximately \$61,000. Mark Kuchenan, the manager of the Akron Police Department Credit Union, testified that Prade's account reflected a balance of \$9,005.45 in May 1997, but that the balance had dropped to \$1,475.15 by November 5, 1997. Robert White, an accounting and payroll manager for the City of Akron, also testified that various deductions affected Prade's take home pay. White testified that Prade had \$372.23 in miscellaneous deductions taken from his paychecks at the beginning of 1997, but that the amount increased to \$513.46 in April 1997 after Margo and Prade divorced and the child support order went into effect. Prade admitted during cross-examination that he also paid child support by cash or money order to another woman with whom he had fathered a child while married to Margo. Additionally, he admitted that he had several hundred dollars in returned check and overdraft fees from his bank in August and September of 1997 and that, as of November 25, 1997, his checkbook balance was minus \$500.

{¶36} On November 26, 1997, the day of Margo's murder, Margo went to Akron General Medical Center to conduct her rounds. Lori Collins, Margo's medical assistant, testified that Margo went to the hospital each morning to conduct rounds before driving to her medical office to begin seeing patients around 9:30 a.m. Collins testified that Margo usually entered the building through the back entrance after she parked her van in the back parking lot. Foster, Margo's office manager, testified that Margo called the office at about 8:50 a.m. that morning to let Collins know she was on her way. Margo also called Robert Holmes, the lease manager from

Rolling Acres Dodge. Holmes testified that Margo left him a voicemail message at 9:05 a.m., asking about the status of the new car she had ordered.

{¶37} Detective Edward Moriarty testified that the videotape surveillance system at Rolling Acres Dodge, which was located directly next door to Margo's medical office, captured several details surrounding the murder. Specifically, one of the cameras in the lot included in its view the rear portion of Margo's medical building and its parking lot. Because the image quality was poor, Detective Moriarty eventually sent the footage to the Secret Service to see if its agents might be able to improve the quality of the images caught on film. The enhanced videotape from the Secret Service depicts Margo's van arriving at her office at 9:09 a.m. At least seven minutes beforehand, a small car arrives and stays in the lot, circling on one occasion immediately before Margo arrives. As Margo parks her van, the driver of the smaller car repositions the car to bring it closer to Margo's van. The two vehicles are situated diagonally from one another such that Margo would have had a clear view of the other car. At 9:10 a.m., a single figure emerges from the smaller car, walks over to Margo's van, and enters it on the passenger's side. The single figure later emerges from the van at 9:12 a.m., walks back to the small car, and leaves while it is still 9:12 a.m. The quality of the videotape is so poor that no details can be gleaned about the individual who enters Margo's van, other than the fact that it is a solitary individual.

{¶38} Fowler, Margo's sister, testified that she had spoken with Margo about getting a new van once her divorce became final because Prade had keys to the van. Rex Todhunter, a sales associate for Rolling Acres Dodge who had sold Margo her van in 1995, testified that Margo's van had an auto-lock feature, such that all the doors to the van would lock once the van reached a speed of 15 miles per hour. Todhunter further explained that, after the vehicle stopped, the doors would remain locked until the driver either pressed the unlock button or

manually opened the door from the inside. For a person outside the van to gain entry, therefore, either the driver would have to unlock the van or the person standing outside would have to have keys to the van.

{¶39} Collins, Margo's medical assistant, discovered Margo's body at about 10:25 a.m. Collins testified that all the doors to the van were closed when she peered through the window and saw Margo. According to Collins, Margo's body was positioned such that the upper half of it was stretched across the center of the van onto the passenger's seat. Collins ran back inside as soon as she saw Margo and called 911 while Foster, the office manager, ran out to the van. Foster testified that she was able to pull open the driver's side door to the van because it was unlocked. While trying to help Margo, Foster saw Margo's keys on the floor of the van. She also noticed that Margo's purse was located right behind the driver's seat along with several patient charts. Collins joined Foster outside when she finished calling 911 and was able to open the van's front passenger door because it was unlocked. Collins also testified that Margo's keys were on the driver's side floor next to Margo's left foot.

{¶40} Detective William Smith photographed Margo's van and testified that nothing appeared to have been ransacked or searched. In addition to Margo's purse having been found in the van, Detective Smith testified that Margo's cell phone was still in the van and that Margo was wearing a large amount of jewelry. The only piece of jewelry that appeared to have been disturbed was a broken diamond and gold tennis bracelet. Detective Smith testified that the police found one link of the broken bracelet on the floor of the van behind the passenger's seat and the remainder of the bracelet on the ground just outside the passenger door. Several buttons from Margo's lab coat also were strewn on the floor of the van, having been torn from the coat that Margo was wearing.

{¶41} No murder weapon was ever recovered, but Michael Kusluski, a firearms examiner from BCI, examined the bullets recovered from Margo's body and testified that they were .38 Special caliber bullets. He further opined that the bullets had been fired from a revolver. Dr. Marvin Platt, the Summit County Medical Examiner, testified that Margo died as a result of six gunshot wounds fired by an assailant positioned to her right. Dr. Platt opined that Margo was shot three times before her assailant then forcefully pulled her forward, ripping three buttons from her lab coat in the process, and shot her three more times. According to Dr. Platt, both the first two gunshots were fatal shots, with the first likely either stunning Margo or rendering her unconscious. Nevertheless, Margo's assailant proceeded to shoot her four more times. Moreover, the first shot pierced Margo's right wrist before entering the mastoid bone on the right side of her head. Dr. Platt described the wound to Margo's wrist as a defensive wound, meaning that Margo had held out her right hand in front of her head in an attempt to protect herself before the shot was fired. Dr. Platt further testified that Margo sustained a bite mark to the backside of her left, upper arm during the incident.

{¶42} Collins, Margo's medical assistant, testified that she saw Prade arrive at the scene of the murder around 11:00 a.m. Lieutenant Daniel Zampelli also testified that he saw Prade arrive in his unmarked city car and was there when the police captain on scene stopped Prade and gave him the news of Margo's death. According to Lieutenant Zampelli, Prade brought his hands to his face and partially went down to the ground before the officers grabbed him and took him into the medical office. Lieutenant Mary Myers arrived shortly thereafter and spoke with Prade alone in the medical office.

{¶43} Lieutenant Myers testified that Prade "answered all [her] questions very calmly, very clearly, [and] very explicitly." Prade told Lieutenant Myers that he had gone to the gym at

his apartment building at about 9:30 a.m. to commence his two-hour workout. Prade indicated that, near the end of his workout, he received a page that there had been a shooting incident and drove straight to Margo's medical office, which was approximately six minutes away. Lieutenant Myers testified, however, that Prade looked "as if he had stepped out of the shower" during her talk with him, as there was not any oil on his head or any sweat stains or odor on his body. She further testified that Prade's hands were "very clean and dry." Although Lieutenant Myers performed a gunshot residue test on Prade, she testified that there were no results from the test because she had incorrectly administered it.

{¶44} Lieutenant Myers testified that Prade gave her substantial details about his morning, including descriptions of the two other people he saw at the gym and of the television show that was playing while he worked out. Prade described, not only the woman he saw at the gym, but also the exercise machines she used, the order of her routine, and the type of car she drove. Lieutenant Myers testified that she asked Prade to get the license plate of the woman's car so that they could speak with her, but specifically told him not to speak to the woman.

{¶45} Williams, Margo's attorney, testified that a great number of Margo's friends and family members went to Margo's house on the day of her murder, after the news broke. Williams testified that Prade also came to the house. While Williams, Margo's mother, and a few other individuals were in Margo's home office searching for her insurance information, Williams stated that Prade entered the room and asked Margo's mother what she was looking for. According to Williams, when Hendricks stated that they were looking for Margo's insurance papers, Prade stated, "I just saw them here a couple days ago, they should be here." Williams further testified that Prade moved back into the house that day and stayed there from that point forward.

{¶46} Steven Anderson, Margo's insurance agent, testified that Margo had a supplemental life insurance policy. Anderson testified that Margo purchased the policy in 1989 and, when she stopped paying the premium on it, the policy became standard term insurance with a \$75,000 death benefit that would remain in force until February 25, 1998. Anderson testified that he sent Margo a letter to remind her about the policy in March 1996, but never received a response. He further testified that Prade was the beneficiary on the policy and, in December 1997, the insurance company paid Prade \$75,238.50 on the policy.

{¶47} Detective McFarland testified that, on February 23, 1998, he conducted a search at the residence of Carla Smith, a female officer with whom Prade had a relationship. Detective McFarland testified that he found a large amount of Prade's financial paperwork in a white plastic bag in the master bedroom closet. Lieutenant Paul Calvaruso examined the items from the bag. He testified that one of the items in the bag was a deposit slip from Prade's bank account dated October 8, 1997, a month before Margo's murder. The back of the deposit slip contained handwritten calculations, in Prade's handwriting, of the various accounts on which Prade owed money. The total amount owed on the accounts was then subtracted from a \$75,000 amount. During his testimony, Prade admitted that he had written the calculations and that he had subtracted them from the amount of Margo's \$75,000 policy, but stated that he had made the notations after Margo's death when he became aware that he was the beneficiary. Detective McFarland, however, testified that he also examined Prade's checkbook and that the various October 1997 balances written in the checkbook aligned with the estimated outstanding balances that Prade had written on the back of the October 1997 deposit slip. In particular, the balance written in the checkbook for Kay Jewelers on October 10, 1997, was \$244.31 while the handwritten notation for Kay Jewelers on the back of the deposit slip was \$240. The only other

checkbook entries for Kay Jewelers were on November 22, 1997, for which the entry indicated a \$204.06 balance, and January 3, 1998, for which the entry indicated a \$173.48 balance.

{¶48} In addition to Carla Smith's house, the police also searched Prade's police locker and a storage locker he had on Jacoby Road in Copley. Detective Donald Gaines testified that the search of Prade's police locker uncovered several cassette tapes, all of which had certain dates written on their registers. Lieutenant Edward Duvall testified that the police uncovered several more cassette tapes at the Jacoby Road storage locker along with a Craig VOX voice activated tape recorder. Lieutenant Duvall testified that the cassette tapes confiscated by the police contained recordings from Margo and Prade's marital home as far back as 1994. Because the recordings on the tapes had been made at low speed, the tapes contained a large number of recordings. For instance, Lieutenant Duvall testified that one of the tapes contained recordings of 233 calls.

{¶49} Lee Kopp, an audio recording engineer, testified at trial that the recorder the police found and asked him to inspect was a voice activated recorder that automatically began recording when it received input of sufficient volume and stopped recording when the input ceased. Kopp explained that the recorder was equipped with a device that allowed it to be plugged into a normal phone jack. Lieutenant Duvall testified that, when they found the cassette tapes and the recording device, they then searched Margo's home and found a phone and phone jack in the third bay of the garage along with a cardboard box containing an additional cassette tape with more recorded phone calls. During his testimony, Prade admitted that the handwriting on the cassette tapes was his, but testified that Margo was the one who wanted the recording device and tapes so that she could keep track of the calls she sometimes received from patients. Yet, Foster, Margo's office manager, testified that Margo never recorded any of her patient calls.

Moreover, several witnesses at trial, including Strong, testified that Margo worried Prade was recording her phone conversations.

{¶50} Two witnesses at trial placed Prade at the scene around the time of the murder. The first witness was Robin Husk, a Rolling Acres Dodge employee. Husk testified that he walked outside at the dealership sometime between 8:00 and 9:00 a.m. on the day of the murder to bring in a car for service. Husk testified that he was on the side of the building when a tall, bald, black man with glasses walked toward him. According to Husk, he asked the man if he needed help, but the man indicated that he did not, said he was going into the dealership, and kept walking. Later that evening, Husk watched the news and saw Prade's picture in conjunction with the story about Margo's murder. Husk testified that he recognized Prade as the man he had seen that morning and that he commented to his fiancé, with whom he was watching the news, that he had seen Prade there that morning.

{¶51} Husk admitted at trial that he did not contact the police with his information. Instead, Husk mentioned that he had seen Prade on the morning of the murder to his colleague at work after the trial had already commenced. The colleague then contacted the police over Husk's protests. Husk testified that he did not want to come forward because he "was afraid [for] [his] life." According to Husk, he knew that Prade was a police captain and would likely have friends on the police department.

{¶52} Lieutenant Elizabeth Daugherty testified that she went to Rolling Acres Dodge to interview Husk after receiving a phone call that they should speak with him. Lieutenant Daugherty stated that the police did not know what Husk looked like when they arrived and that he initially tried to walk away from them. When she finally spoke with Husk, however, Lieutenant Daugherty testified that Husk said he saw Prade in the dealership parking lot on the

morning of the murder and that he had told his girlfriend about the incident the day it occurred. Lieutenant Daugherty agreed that Husk appeared to be afraid to say anything about the case and testified that Husk expressed concern over Prade's status as a police captain. Husk selected Prade from a photo array on August 28, 1998.

{¶53} The second witness who placed Prade at the scene on the day of Margo's murder was Howard Brooks. Brooks testified that he was a patient of Margo's and that his sister dropped him off at Margo's office around 9:00 a.m. the morning of the murder. Once he finished having his blood drawn, Brooks testified that he was preparing to walk out the glass door of the medical building to the back parking lot when he "heard this car peeling off." Brooks then looked and saw a man driving a car quickly out of the lot. Brooks described the man as a bald man with a very thick moustache. Brooks testified that he "didn't pay [the incident] no attention" when it happened, but that he remembered it after he spoke with the police. Brooks selected Prade from a photo array on February 16, 1998, and indicated that he was 100% positive of his identification. Brooks also identified Prade in court as the man he saw driving quickly out of the parking lot.

{¶54} Much like Husk, Brooks did not come forward with his information at the time it occurred. Brooks testified that he ordered pizza at some point shortly after the murder and recognized the pizza delivery driver as another man he had seen in the parking lot of Margo's medical office on the day of the murder. Brooks testified that he asked the man if he had been at Margo's office that day and the man agreed that he was. Brooks testified that he was contacted by Detective Washington Lacy the following day. Detective Lacy testified that he interviewed Brooks on December 5, 1997, after a pizza delivery man from Zippy Pizza contacted the police department and informed them that Brooks was a possible witness. Detective Lacy indicated

that he conducted two interviews with Brooks, but that Brooks failed to give him any information at either interview. Later, on February 16, 1998, Lieutenant Myers interviewed Brooks for a third time. Brooks then gave Lieutenant Myers his information, and she presented him with a photo array. Lieutenant Myers testified that Brooks “firmly tapp[ed]” Prade’s photograph when he viewed it and stated “[t]hat’s the man.”

{¶55} Brooks also testified at trial about all of the other people he saw in the parking lot of Margo’s medical building the morning of her murder. Brooks testified that, after he heard the car “peeling off” and saw it leave, he exited the glass door of Margo’s medical building and stood outside to smoke a cigarette and wait for his sister to come back. Brooks testified that: (1) a secretary from the building came out and he opened the door for her when she returned a short while later with food; (2) a secretary from Margo’s office came out and returned a short while later; (3) a businessman with a briefcase arrived and parked in the spot the secretary had vacated when she left the building; and (4) a tall black man, who Brooks later recognized as the pizza delivery man, and a nurse arrived in a blue van and went into the building. Deborah Adams testified that she worked on the second floor of Margo’s medical building and left around 9:15 a.m. to purchase breakfast for her staff. Adams testified that, when she returned with the food, a black man let her in the door to the building. Additionally, Foster, Margo’s secretary, testified that she left the building after 9:00 a.m. to make a bank deposit and that Margo’s van was already there when she left. Foster testified that she was only gone for a few minutes before she came back to the building. Finally, Todd Restivo, a pharmaceutical representative, testified that he arrived in the parking lot at about 9:15 a.m. and organized his call notes on his laptop computer before entering the building to see Margo. Restivo testified that he observed a black man standing at the entranceway to the building when he entered it.

{¶56} As previously noted, Prade told Lieutenant Myers that he saw two other people at his apartment's gym during the course of his workout on the morning of the murder. Those people were later identified as Mary Lynch and Doug Doroslovac. Lynch testified that she routinely worked out at the gym five to seven days a week and spent half an hour working out on the days when she did strictly cardio. By the time of trial, Lynch could not remember the type of workout she did on the day of the murder. She agreed, however, that she had given a statement to the police closer to the date of the murder and that her memory would have been more accurate at the time she made the statement. Lynch testified that, based on the statement she gave, she probably was just doing cardio that day. Lynch testified that Prade entered the gym partway through her routine when she was on the stationary bike and that Prade was still there when she left. Lynch testified that she generally tried to be at the gym by 8:30 a.m., but that she could have arrived anywhere from 8:30 a.m. to 9:30 a.m. to begin her half-hour workout. Although Lieutenant Myers testified that she specifically instructed Prade not to speak with Lynch, Lynch testified that Prade approached her at the gym the day after the murder. According to Lynch, Prade handed her a business card, said that his ex-wife had just been killed, and said that "he wanted to provide the police with somebody who could indicate his whereabouts" at the time of the murder.

{¶57} Doug Doroslovac, the other man that Prade indicated was at the gym the morning of the murder, testified that he could not remember using the gym that day. Even so, Doroslovac testified that he always used the gym in the afternoon, usually after 3:00 p.m. Doroslovac specified that, because he skated every morning in Cleveland for several hours, he never arrived at the gym earlier than the afternoon. He also testified that he had never seen Prade at the gym.

{¶58} Prade testified that he and Margo had a happy marriage and that their later divorce was a mutual decision. According to Prade, he and Margo amicably discussed the divorce for a long time before it happened. Prade stated that he did not sign any of the separation agreements Williams sent because he thought they were just rough drafts and Margo always told him not to worry about them. Additionally, Prade testified that he did not leave the marital home for several months after the divorce because Margo never asked him to leave during that time. He testified that, even after he moved out, he continued to make regular trips to the marital home because he still received his mail there. Prade testified that he would open any mail at the house that had his name on it, including mail jointly addressed to him and Margo.

{¶59} Prade denied making most of the negative comments toward Margo that other witnesses testified to hearing or hearing about. For instance, Prade agreed that the meeting that took place at Williams' office was an "emotional" one, but denied that he ever directly called Margo an "unfit mother" or a "slut" or a "whore." Prade testified that he only referenced those things as hypothetical examples of when a father might be able to get custody of his children. Similarly, Prade testified that he never hired a private investigator to follow Margo, but simply made "an off-the-cuff remark" and that Margo "was aware of what [he] was talking about." Prade stated that Hendricks, Margo's mother, was mistaken when she testified that she heard Prade tell Margo "[y]ou fat faced bitch, nobody wants you."

{¶60} Prade admitted that he accessed Margo's medical office at night, but testified that he did so with her permission. According to Prade, he frequently stopped there to use the bathroom or to eat his lunch while working third shift. Prade also denied taping any of Margo's phone conversations. Prade claimed that Margo wanted to record phone calls from her patients and that he had several of the cassette tapes in his locker because he would help label them and

erase them so that they could be reused. Although the State played several of the tapes at trial and Margo could be heard stating on the tapes that she thought her phone was being tapped, Prade claimed that Margo was not referring to the recordings he was helping her make. Prade testified that Margo “had her own concept about what telephone tapping was.” He also denied ever calling the babysitter during the summer of 1997 to ask about Margo’s whereabouts or showing up at Akron General Medical Center to argue with Margo.

{¶61} Prade testified that he arrived at his apartment’s gym at 9:00 a.m. the morning of the murder and that Lieutenant Myers was mistaken when she testified that he had told her he arrived at 9:30 a.m. Prade described his workouts as two and a quarter to two and a half hours in length, but testified that he would only start sweating toward the end of the routine. Prade testified that he was about two hours into his routine when he left to drive to Margo’s medical office and that he came straight to the office in his sweaty gym clothes.

{¶62} Limited DNA evidence was introduced at trial through the testimony of Thomas Callaghan, a forensic DNA examiner from the FBI. Callaghan testified that his office performed PCR testing on three areas of the bite mark section of Prade’s lab coat. According to Callaghan, he took cuttings from the left-hand side, middle, and right-hand side of the bite mark because he “was covering the widest area figuring that if someone’s tongue was in that area rubbing up against that area, they may have left some skin cells there.” Callaghan agreed that, of all of the evidence that might be tested for DNA, the bite mark was “very important” evidence. Yet, he testified that the PCR testing he performed on the three cuttings from the bite mark only resulted in uncovering a DNA profile consistent with Margo’s DNA, as the lab coat was saturated with her blood. Callaghan explained that a very large amount of DNA can overshadow a smaller

amount of DNA in PCR testing, such that the smaller amount will not be detected. Callaghan testified:

in my opinion if someone bites someone else or that fabric, they may have left DNA there. It can be of such a low level that it's not detected. Or they may have left no DNA there.

Callaghan testified that Prade was excluded as the source of the DNA that he found on the three cuttings from the bite mark section.

{¶63} Three dental experts testified at trial; two for the State and one for the defense. Dr. Lowell Levine, an expert in forensic odontology/dentistry, first testified for the State. Dr. Levine testified that he examined photographs of the pattern impression left on Margo's lab coat, photographs of the bruising pattern on her skin, the bite mark section of the coat, which was sent to him by the FBI, and models of several sets of teeth. Dr. Levine stated that he actually received two impressions of Prade's teeth, one of which he initially received with several other sets of teeth submitted for his analysis and one of which he received later on. Dr. Levine opined that the bite mark to Margo's skin was consistent with human teeth and had a pattern of the lower teeth only, with no pattern emerging for the upper teeth. Dr. Levine compared the pattern of the bite mark on Margo's skin with the lower teeth on each of the models he received.

{¶64} Dr. Levine testified that dental experts can arrive at three different types of conclusions. First, an expert can absolutely exclude a person. Second, an expert can testify that a pattern injury is consistent with a person's dentition, meaning that the person could have been the biter, but the pattern does not offer enough answers to allow for a definite opinion. Third, an expert can testify to a reasonable degree of scientific certainty that a pattern injury was caused by a person. Dr. Levine opined that, after he examined the first model he was sent of Prade's teeth, he determined that the bite mark pattern was consistent with Prade's lower teeth, meaning that

Prade could have caused the bite mark. Dr. Levine testified that he “made a more lengthy comparison” when he examined the second impression of Prade’s teeth and, again, concluded that Prade’s lower teeth were consistent with the bite mark injury on Margo. Dr. Levine testified that he was “not able to interpret any evidence of upper teeth” on Margo’s skin. Dr. Levine also testified that Prade wore a full upper dental prosthesis, but did not comment on how a prosthesis might affect a bite mark impression.

{¶65} On cross-examination, Dr. Levine admitted that a lab coat and blouse could affect the quality of a bite mark impression left on the skin beneath them. He further admitted that: (1) bite mark experts can disagree amongst themselves; (2) it is possible for more than one person to leave an almost identical bite mark; and (3) he was aware of at least one case where an individual was convicted based on bite mark identification testimony and later exonerated. Dr. Levine also testified that it was possible that someone other than Prade had made the bite mark on Margo’s arm.

{¶66} The second dental expert to testify for the State was Dr. Thomas Marshall, who was also an expert in forensic odontology/dentistry. Dr. Marshall testified that he examined the bite mark to Margo’s arm in person at the medical examiner’s office and directed the medical examiner’s photographs of the injury. Dr. Marshall also examined the lab coat and the bite mark impression on it and made casting impressions of several individuals, including Prade. Dr. Marshall testified that, in order to make a casting of Prade’s upper teeth, he asked Prade to simply remove his denture and hand it over. Dr. Marshall testified that Prade did not simply “flip [his denture] out” with his tongue. Instead, he “broke the seal” and handed the denture to Dr. Marshall.

{¶67} Dr. Marshall testified that he compared photographs of the bite mark on Margo's arm with photographs of the impressions he made of Prade's lower teeth. To do so, Dr. Marshall re-sized the picture of the bite mark to make it the same size as the pictures he took of the dental impressions he made. He then created overlays, so that he could lay the images on top of each other. According to Dr. Marshall, he "just couldn't exclude [Prade]" because, as he compared the photographs of the bite mark injury and the impression of Prade's lower teeth, "[e]very mark lined up with every other mark." Dr. Marshall then spent an extensive amount of time explaining how the marks aligned. Dr. Marshall finished his testimony by opining that "[his] conclusion [was] that the bite found on Margo Prade was made by Captain Prade." Dr. Marshall also opined that he did not believe more than one person could make the same bite mark.

{¶68} On cross-examination, Dr. Marshall admitted that clothing, such as a lab coat and a blouse, could affect the quality of a bite mark impression left on the skin. He also testified that he considered Dr. Levine, the State's other expert, to be "one of the leading bite mark experts in the country."

{¶69} The third dental expert to testify was Dr. Peter Baum, who testified for the defense. Dr. Baum, a maxillofacial prosthodontist, testified as an expert in dentistry. Dr. Baum testified that he personally examined Prade and took impressions from him. Dr. Baum stated that the fit of Prade's upper denture was "exceptionally poor" such that his teeth were "almost unusable for \* \* \* biting down." Dr. Baum testified that Prade had "lost virtually all of the structural bone that would hold an upper denture in place" due to the poor fit of his denture over an extended period of time. Consequently, Dr. Baum opined that "the act of biting for Mr. Prade, [was] a virtual impossibility." During his testimony, Dr. Baum also stated that he took a saliva sample from Prade to send off for analysis because "it was [his] supposition that if there

was a bite made on a piece of fabric, whoever did it probably slobbered all over it, and that if [they] could obtain a DNA sample from that fabric, [they] would be able to possibly identify or exclude someone.”

{¶70} On cross-examination, Dr. Baum admitted that the accuracy of his examinations depended upon the cooperation of the patient and that Prade was in control of how hard he was willing to bite for purposes of the impressions Dr. Baum took from him. Dr. Baum further acknowledged that the bite mark on Margo’s arm did not reflect any evidence of an upper bite mark.

### **The PCR Evidence**

{¶71} The trial court heard three categories of evidence presented in support of and in opposition to Prade’s PCR petition: DNA evidence; bite mark identification evidence; and eyewitness identification evidence. We set forth the evidence presented in each distinct category in turn.

#### DNA Evidence

{¶72} Dr. Julie Heinig, the Assistant Laboratory Director for DDC, testified for the defense. Dr. Heinig testified that DDC received the bite mark section of Margo’s lab coat for Y-STR testing, “which would hone in on the male DNA that would be present from the saliva or the skin cells from the biting of the lab coat.” When DDC received the bite mark section, six cuttings had already been taken from it due to prior testing in 1998. Dr. Heinig stated that DDC also received five DNA extracts taken by the FBI; three extracts that were swabbings from the three cuttings the FBI made to the bite mark section and two extracts, labeled “Q6” and “Q7,” that were designated as “swabbings of the bite mark.” Dr. Heinig testified that it was unclear

whether Q6 and Q7 were swabbings taken from the bite mark section or swabbings taken from the skin on Margo's arm.

{¶73} Dr. Heinig stated that DDC performed two phases of testing. First, DDC retested the five extracts it received from the FBI using Mini-STR analysis. Dr. Heinig testified that DDC was unable to obtain any DNA from four of the extracts. As for extract Q7, DDC was able to obtain a partial profile consistent with Margo's DNA as well as "a 'Y' allele \* \* \* at the sex-determining locus indicating male DNA was present." Because the Mini-STR analysis consumed the Q7 extract, however, Dr. Heinig was unable to perform Y-STR testing on it.

{¶74} The second phase of testing DDC performed was testing on new cuttings that DDC made. Dr. Heinig testified that DDC labeled its first cutting 19.A.1. That cutting overlapped two prior cuttings made by the FBI and was taken from the middle to right-hand side of the bite mark. Dr. Heinig extracted the DNA from 19.A.1, amplified it, and performed Y-STR testing on it. Of the sixteen total loci used as genetic markers for Y-STR testing, DDC was able to obtain results on three loci when it tested 19.A.1. Those three loci were DYS393, DYS391, and DYS437. DYS393 contained a number 13 allele,<sup>4</sup> DYS391 contained a number 10 allele, and DYS437 contained a number 15 allele. Dr. Heinig then compared the partial male profile results obtained from 19.A.1 with Prade's profile results, as demonstrated by the chart below:

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<sup>4</sup> An allele is a numerical coding used to describe the particular form of gene that an individual has at a particular locus.

| Locus  | 19.A.1 Allele Results | Prade's Allele Results |
|--------|-----------------------|------------------------|
| DYS393 | 13                    | 11                     |
| DYS391 | 10                    | 10                     |
| DYS437 | 15                    | 16                     |

Because Prade's profile did not match the partial male profile Dr. Heinig obtained from 19.A.1, Dr. Heinig concluded that Prade was excluded as the contributor of the partial male profile obtained from 19.A.1.

{¶75} Seeking a larger sampling, DDC then made three additional cuttings from the bite mark along its edges at the left-hand side, middle, and right-hand side. Dr. Heinig then combined the extract from those three cuttings (19.B.1) with remaining extract from 19.A.1 to form 19.A.2. Of the sixteen total loci used as genetic markers for Y-STR testing, DDC was able to obtain results on seven loci when it tested 19.A.2. Those seven loci were DYS456, DYS458, DYS385a/b, DYS393, DYS391, DYS437, and DYS448. Dr. Heinig explained that each of the foregoing seven loci contained at least one major allele, but that several of them also contained minor alleles that DDC could not use in its analysis. Dr. Heinig explained that alleles are measured by relative fluorescence units ("RFUs") that peak on a graph according to the amount of DNA that exists at any particular loci. DDC's threshold for interpreting DNA is 100 RFUs. Accordingly, when a peak measures less than 100 RFUs, DDC will not rely on that peak in forming its conclusions about the DNA results. Instead, Dr. Heinig simply noted any minor alleles that emerged at particular loci with asterisks. Dr. Heinig compared the partial male profile results obtained from 19.A.2 with Prade's profile results, as demonstrated by the chart below:

| Locus     | 19.A.2 Allele Results | Prade's Allele Results |
|-----------|-----------------------|------------------------|
| DYS456    | 14, (*)               | 15                     |
| DYS458    | 16                    | 15                     |
| DYS385a/b | (*), 17               | 13, 14                 |
| DYS393    | 13                    | 11                     |
| DYS391    | (*), (*), 10          | 10                     |
| DYS437    | 14, (*)               | 16                     |
| DYS448    | 19, (*)               | 20                     |

Because Prade's profile did not match the partial male profiles Dr. Heinig obtained from 19.A.2, Dr. Heinig concluded that Prade was excluded as the contributor of the partial male profiles obtained from 19.A.2.

{¶76} Dr. Heinig agreed that the results from 19.A.2 produced more than one partial male profile such that "two or more individuals" contributed to the sample. Nevertheless, Dr. Heinig found it significant that Prade could be excluded from contributing to the partial male profiles that DDC obtained. In the affidavit she submitted to summarize her results, Dr. Heinig averred:

Given my understanding of the manner in which the perpetrator bit Dr. Prade during the murder the perpetrator would have deposited his saliva and/or trace amounts of his skin as a result of contact between the lab coat and his lips, tongue and/or other areas of his mouth. It also is possible that other males could have touched this area of the lab coat, which could have left their DNA there.

As between the possibility that the male DNA identified in items 19.A.1 and 19.A.2 during our testing of the area of the lab coat over the bite mark came from, on the one hand, the perpetrator in the act of forcefully biting Dr. Prade such that the bite made a lasting impression on her skin through two layers of clothing or, on the other hand, any other male who simply touched this area of the lab coat, the former is substantially more likely than the latter.

Dr. Heinig agreed with the testimony given by Dr. Peter Baum during trial that whoever bit Margo “probably slobbered all over the lab coat.” Consistent with her affidavit, she also agreed that a person who bit another’s clothing would likely leave enough DNA on the fabric for later testing.

{¶77} Dr. Heinig testified that there was “a low amount of DNA” in the cuttings she tested (19.A.1 and 19.A.2), but that the low quantity of DNA she found had no bearing on the certainty of the exclusion result she obtained for Prade. She also testified that a number of things could have accounted for the low quantity of DNA she found, including: the prior cuttings taken by other laboratories, the amylase mapping performed on the bite mark section, and the degradation in the DNA that may have occurred over fourteen years. Dr. Heinig testified that saliva and epithelial cells from the mouth contain a wealth of DNA whereas DNA from casual touching generally results in the transfer of a small amount of DNA. Accordingly, Dr. Heinig concluded that it was more likely that the biter’s DNA was included in the testing she performed.

{¶78} On cross-examination, Dr. Heinig admitted that swabs from a person’s mouth generally produce millions of cells, but that she had not even been able to quantify the amount of cells she had obtained from 19.A.1 and 19.A.2 because the amount was so low. Dr. Heinig also admitted that, on at least one locus, the major profile that emerged in 19.A.1 was different than the major profile that emerged in 19.A.2. Specifically, a 15 allele emerged at DYS437 in 19.A.1, but a 14 allele emerged at the same locus (DYS437) in 19.A.2, with the 15 allele shifting to a minor allele that fell beneath DDC’s threshold. Dr. Heinig conceded that, in order to have two different male profiles, either contamination or DNA from transfer DNA had to have occurred. Nevertheless, she indicated that it “could very well be that the minor alleles are from contamination or transfer DNA or touch DNA. And [ ] the major profile is from saliva.” Dr.

Heinig testified that “with this type of a bite[]mark you would expect to get saliva,” so she thought there was “a high likelihood” that the DNA she found came “from saliva rather than touch DNA.”

{¶79} Dr. Rick Straub, a Ph.D. in genetics and independent consultant on forensic DNA testing, also testified for the defense. To form his opinions in this case, Dr. Straub indicated that he reviewed all of the results from the FBI, SERI, DDC, and BCI. Dr. Straub testified that DDC’s testing obtained “[v]ery low level male DNA,” but that “the individual that bit [Margo’s lab coat] would have to have left a crucial amount of their cellular material on it.” Dr. Straub testified that saliva is an excellent source of DNA because “the epithelial layer on the inside of your mouth sloughs off cells constantly.” Consequently, Dr. Straub opined that some of the DNA that DDC found “should be from the biting event.”

{¶80} In his affidavit summarizing his findings, Dr. Straub averred:

There is a strong possibility that some male DNA found in the bite mark area of the lab coat would have come from the perpetrator’s saliva or skin, rather than exclusively from someone unrelated to the attack who may have deposited his DNA there by incidental touching. While it is theoretically possible that the perpetrator’s saliva or skin would not be detected in a Y-STR test of the bite mark area of the lab coat, and that the same test would simultaneously detect the DNA profiles of men who engaged in incidental touching of that area of the lab coat, such a scenario is somewhat far-fetched and illogical, and would not represent the most likely outcome. It is far more likely that the male DNA found in the bite mark area in the testing conducted in 2012 came from the perpetrator biting the victim’s arm during the attack. This conclusion is reinforced by the fact that [BCI’s] Y-STR testing of cuttings from the lab coat that were taken outside the bite mark area did not find male DNA.

Dr. Straub averred that “one would expect to find the Y-STR profile of the attacker before one would find the Y-STR profile of a male who engaged in incidental touching of the lab coat before or after the attack.”

{¶81} Dr. Straub also testified at the hearing that he felt “that biting activity should leave a lot more cellular material than touch would.” Dr. Straub testified that DNA left when an individual merely touches an item is “highly variable,” with the amount of DNA left on an object varying from person to person and varying depending on the pressure of the touch involved. He further testified that the location of the bite mark on Margo was an unlikely place for casual touching and that the lack of DNA on the four other spots BCI tested on the lab coat corroborated his theory that the lab coat had not been subjected to a lot of transfer DNA. Dr. Straub gave several examples of things that could explain the low level of male DNA that DDC discovered on the cuttings it took from the bite mark section. He hypothesized that DNA loss could have occurred due to multiple agencies taking cuttings of the bite mark section, the amylase mapping SERI conducted on the entire bite mark section, and the swabbing that SERI took of the bite mark section to test for blood. Dr. Straub also testified, however, that it was unlikely that any of the labs involved in the DNA testing had contaminated the lab coat because of the precautionary protocols that labs follow when testing items.

{¶82} As to the testing conducted by SERI in 1998, Dr. Straub opined that just because the confirmatory test did not show amylase, “that does not necessarily mean there was not saliva there.” Dr. Straub testified that the initial amylase mapping test could have “removed most of the amylase activity” such that there was an insufficient amount of amylase for the confirmatory test. Dr. Straub also averred in his affidavit that, “amylase testing, particularly back in 1998, would sometimes produce false negatives (i.e., failing to detect amylase when it is present), just as it would sometimes produce false positives.” Additionally, Dr. Straub pointed to the testing SERI conducted as evidence that, even in 1998, the DNA evidence left by the biter may have been minimal. Dr. Straub noted that SERI had examined the three cuttings it made under a

microscope and had only identified epithelial cells on two of the three samples at “a fairly low level.” Consequently, Dr. Straub testified that even by the time SERI conducted its testing in 1998 “there was very little cellular material left.”

{¶83} On cross-examination, Dr. Straub admitted that DDC had only found “a very low number” of cells on 19.A.1 and 19.A.2 despite the fact that saliva generally contains over a million DNA cells. Dr. Straub also admitted that amylase testing sometimes produces false positives, so the initial test SERI conducted could have incorrectly tested positive for amylase when, in fact, there was no saliva, as indicated by the confirmatory test. Dr. Straub conceded that it was possible that the biter’s DNA was not present on the lab coat. He further conceded that there were partial profiles from at least two males on the bite mark section so the possibility of contamination or transfer DNA could not be eliminated. Additionally, he conceded that, if the partial profiles that DDC discovered were not from the biter, DDC’s exclusion of Prade was meaningless. Even so, Dr. Straub opined that the biter’s DNA “should be part of [DDC’s] sample somehow, some way, because he would have left more DNA on it than anyone could have through touching.”

{¶84} Dr. Elizabeth Benzinger, the Director of Research for BCI, testified for the State. Dr. Benzinger testified that the ideal input amount of DNA for testing purposes is one nanogram of DNA, which amounts to approximately 150 cells. Meanwhile, the lowest reference amount is .023 nanograms, which amounts to approximately four cells. With regard to the DNA extractions that DDC obtained, Dr. Benzinger testified that 19.A.1 contained about three to five cells and 19.A.2 contained about ten cells. She explained that many of the loci did not return results on DDC’s extractions because “[w]e’re just at the threshold where it’s just possible now to get results but not all of the tests are working. There’s not enough DNA.”

{¶85} In a laboratory report that Dr. Benzinger co-signed with the State's other expert, Dr. Lewis Maddox, Drs. Benzinger and Maddox wrote:

We agree that Douglas Prade is excluded as a contributor to the partial DNA profiles obtained from the bite mark \* \* \*. However, DNA testing has failed to identify a full DNA profile besides that of Margo Prade from the bite mark \* \* \*. We question the relevance of the partial mixed profiles obtained. Within one year of the crime, SERI was unable to find evidence of saliva on the bite mark area, suggesting that the amount of saliva or cells or DNA originally deposited was very low. Y-STR testing, capable of identifying male DNA even in the presence of the blood stains from Margo Prade, failed to obtain a full male DNA profile. Instead, a mixture of partial male profiles was obtained. The presence of multiple low-level sources of DNA is most easily explained by incidental transfer (patients, police, lab workers, court officials).

Dr. Benzinger also testified at the hearing that, while Prade was excluded as a contributor of the partial male profiles obtained from the bite mark section, she had no way of knowing whether the DNA of the biter was present.

{¶86} Dr. Benzinger agreed that, based on its preliminary testing, SERI had removed the three areas of the bite mark section that showed probable amylase activity. Accordingly, the areas that had the best probability of containing saliva were never tested for male DNA and were no longer available for testing. Even so, Dr. Benzinger noted that the confirmatory test for amylase had resulted in a negative result. Dr. Benzinger contrasted the preliminary test from the confirmatory test as follows:

[T]he amylase mapping test is taking a piece of paper that has been infiltrated with starch, and it's damp, and you press it on the evidence, and wait for the amylase enzyme to diffuse up into it and break down the starch. And then you add iodine, and the iodine turns the starch blue, and where you see clear spots you know that that is where there is amylase activity.

But that test is very difficult to interpret because it's prone to, if some of the starch sticks to the material, you'd have a light spot, and that might be amylase activity or it might just be where your starch is sticking.

So it's a presumptive test. It helps us to zero in on the area that might have some amylase activity.

And the confirmatory test is where you actually take a little cutting of the material and you do this test in a test tube, so \* \* \* you're looking for a change in the color of the solution.

Dr. Benzinger specified that “[i]f the confirmatory test is negative, then your results are negative.”

{¶87} As previously noted, Dr. Benzinger testified that there was no way to know where the partial male profiles DDC identified came from or when they were deposited on the lab coat. She opined, however, that, if the biter had left his saliva on the coat, she would have expected to find more DNA in the extractions taken from the bite mark section.

{¶88} Dr. Lewis Maddox, the DNA technical leader for BCI, also testified for the State. Dr. Maddox testified that a typical DNA standard is taken from the mouth by way of buccal swab due to the large amount of DNA that is present in the mouth. Dr. Maddox specified that BCI usually has to “take a smaller cutting or dilute [a] sample in order to target [their] range for [a DNA] test” from a buccal swab due to the fact that the swab contains too much DNA. Dr. Maddox confirmed that DDC had “a very small number of cells with male DNA” in its extractions and that no strong profile had emerged. Dr. Maddox agreed that DDC’s results evidenced more than one partial male profile and that “the difference between [the] major type and [the] minor type [was] not very strong.” According to Dr. Maddox, the results were “more indicative of transfer of some type of DNA.” Dr. Maddox specified that he did not “see a strong profile here like [he] would expect from one individual that’s \* \* \* bit[ten] an item.”

{¶89} Dr. Maddox testified that preliminary amylase testing does not consume or alter the amylase that is present on a sample such that the amylase would not be detected with follow-up testing. Accordingly, Dr. Maddox testified that he would have expected SERI to confirm the presence of amylase back in 1998 had there been a “slobbering killer,” as suggested by one of

the defense witnesses at trial. Dr. Maddox testified that he also “would expect that we would have obtained a male profile of strong significant signal” had the biter left a significant amount of DNA on Margo’s lab coat. Instead, Dr. Maddox pointed out that DDC discovered two partial profiles without “a significant difference in the contributions of those two.” Dr. Maddox explained:

I would expect if you had a large amount of DNA there from a person that created a bite[]mark, I would expect that you still would have seen more DNA from that individual versus a background level, and then also even within that background level, you’ve got at least two individuals here that are about the same amount.

Because of the low level of results obtained, the appearance of more than one partial profile, and the lack of consistency in the major profile with regard to the multiple profiles, Dr. Maddox concluded in his laboratory report that “[t]he presence of multiple low-level sources of DNA is most easily explained by incidental transfer,” rather than the presence of the biter’s DNA.

{¶90} Dr. Maddox also testified regarding the cuttings that BCI took from the lab coat. Maddox testified that, unlike DDC’s threshold of 100 RFUs, BCI’s threshold for allele recognition is 65 RFUs. Accordingly, BCI will rely on results that even DDC will not rely on, as DDC’s threshold is 35 RFUs higher than BCI’s. BCI’s first cutting, labeled 111.1, was taken from the very middle of the bite mark, directly next to and to the left of the 19.A.1 cutting taken by DDC. That cutting (111.1) was then swabbed on its front and back sides to create 111.2 and 111.3. Dr. Maddox testified that the Y-STR testing performed on 111.1 failed to produce any DNA profile whatsoever. Meanwhile, 111.2 and 111.3 produced a partial male profile, but BCI determined that the results were “insufficient for comparison purposes.” Dr. Maddox explained that BCI interprets its Y-STR testing results as a whole, rather than by each individual locus, and that overall, for 111.2 and 111.3, there was “not enough information there for [BCI] \* \* \* to make an exclusion for the sample.”

{¶91} In addition to 111.1, 111.2, and 111.3, Dr. Maddox also testified that BCI took four other cuttings of the lab coat to determine whether it had been subjected to widespread contamination. In particular, BCI tested: (1) the area just outside the bite mark section; (2) the left forearm area; (3) the right arm area in the same spot where the bite mark had occurred on the left; and (4) the back area, nearest the bottom of the coat. Dr. Maddox testified that Y-STR testing BCI conducted on the four cuttings failed to detect any male profile(s).

#### Bite Mark Identification Evidence

{¶92} Dr. Mary Bush, an expert in forensic odontology research, testified for the defense. Dr. Bush testified that, for bite mark identification to be reliable, one must first accept that human dentition is unique and that unique dentition is capable of transferring to human skin in a unique way. According to Dr. Bush, neither premise can be scientifically proven at this point in time.

{¶93} Dr. Bush testified that she had conducted numerous studies that showed dentition could not be established as unique through mathematical uniqueness. Specifically, Dr. Bush had made measurements of teeth within a specific population using specific data points and had found teeth that were mathematically indistinguishable within that population, meaning that they were not unique. Dr. Bush opined that, because the difference in teeth cannot be quantified in a mathematical and statistical way, the uniqueness of dentition cannot be “supported as of today.”

{¶94} Dr. Bush also testified that she had conducted numerous studies on the ability of dentition features to accurately transfer to skin. Dr. Bush explained that she conducted studies using a mechanical jaw (dental models mounted on a vice grip) to bite cadavers multiple times. In one particular study, Dr. Bush bit a cadaver 23 times using the same set of teeth and each bite mark appeared to be different. Dr. Bush testified that her studies allowed her to conclude that

she was unable to predict the range of distortion that occurs when a bite mark is made to skin. Dr. Bush agreed that, based on her studies, skin has not been “scientifically established as an accurate recording medium of the biting dentition.”

{¶95} Dr. Bush admitted that her expertise was purely scholarly in nature and that she had never examined any “real-life bite[]marks” in her career. On cross-examination, she further admitted that cadavers differ from living people in that their internal temperatures cannot be raised to 98.6 for purposes of testing, they do not bruise, and any movement that might occur in a living person during a biting event can only be approximated on a cadaver by having one person manipulate the cadaver while the other operates the mechanical jaw. Moreover, Dr. Bush admitted that she placed all of the dots she used as data points in her mathematical uniqueness studies on the teeth herself, such that she had to have a statistician determine a rate of error for her placement of the dots.

{¶96} Dr. Franklin Wright, Jr., an expert in forensic odontology, testified for the State. Dr. Wright testified that he is board certified in forensic odontology, has personally examined hundreds of actual bite marks throughout the course of his career, and has testified as an expert in forensic odontology on numerous occasions. Dr. Wright opined that human dentition is unique and capable of transferring to human skin in certain instances, but that the science of bite mark analysis suffers due to analysts who “tend to overvalue very weak and poor bite[]mark evidence and reach conclusions that are not supportable.” According to Dr. Wright, bite mark evidence is generally accepted within the scientific community, but its value in any specific case depends upon the subjective interpretation of the analyst examining it.

{¶97} Dr. Wright pointed out several flaws in Dr. Bush’s studies. Dr. Wright noted that the proper placement of data points in any mathematical uniqueness study is “absolutely

critical,” as improper placement will affect all of the study results. Dr. Wright explained that when he uses data points to mathematically compare teeth, he takes digital photos of the teeth, blows up the pictures until they pixilate, and uses the pixilation points to place the data points. Dr. Wright criticized Dr. Bush’s mathematical uniqueness studies because she had placed the dots for the data points by hand. Dr. Wright showed several examples of images of teeth on which dots had been placed by hand. Specifically, he showed that, when those images were enlarged, they showed that the dots for the data points had not been placed on the exact edges of the teeth at issue.

{¶98} As to Dr. Bush’s cadaver studies, Dr. Wright testified that cadaver skin simply cannot compare with living skin. Dr. Wright explained that cadaver skin only distorts after a bite for two to three minutes at most because, unlike live skin, no bruising, contusions, or lacerations occur. Dr. Wright also testified that using a mechanical jaw to bite is problematic because the jaw operates on a fixed hinge that cannot mimic the wider range of movement that an actual jaw is capable of. According to Dr. Wright, “[t]he patterns that are created in the real world bite[]mark case do not at all resemble the patterns [in] cadaver pinching.”

{¶99} Dr. Wright testified that, once it is determined that a bite mark is a human one, there are five categories that can be used to describe the link between the bite mark and a suspected biter. Specifically, a bite mark analyst can conclude that a person is the biter, is a probable biter, cannot be excluded as the biter, can be excluded as the biter, or that the identification is inconclusive. Dr. Wright testified that he had never used the first category (person is the biter) in his career because people do have similar sets of dentitions and “if you’re saying that the person is the biter, to [him], it would have to be so exclusive and so convincing that it would have to have been witnessed.” Dr. Wright further testified that he had used the

second category, probable biter, a few times and that category means that it is “more likely than not this person’s the biter.” Dr. Wright explained that the third category (cannot be excluded as the biter) means that “there’s some characteristics there that show some linking but nothing that’s definitive enough to include.” Meanwhile, exclusion means there is “no association” between the suspected biter and the pattern and inconclusive means the bite mark looks like a human bite mark, “but there’s really not anything else you can say about it.”

{¶100} According to Dr. Wright, biter identification in an open population, meaning one where anybody in the world can be the biter, is “simply not supported.” By that same token, if a closed population of suspected biters had similar teeth, Dr. Wright opined that it “would be very difficult, if not impossible, even with a great bite[]mark \* \* \* to separate those individual dentitions because of the similarity of the teeth.” Nevertheless, Dr. Wright opined that, when a limited population of suspected biters exists and the suspected biters have different dentitions, “I think very reliably you can use bite[]mark analysis for biter exclusion or biter identity.” Dr. Wright defined a closed population as “the suspected population of people who had contact with that victim at the time that the event occurred.”

{¶101} On cross-examination, Dr. Wright admitted that bite mark testimony has helped to convict innocent people who were later exonerated based on other evidence, such as DNA. He further admitted that bite mark evidence should only be used as part of the evidence that exists in a particular case and “should not be the only evidence.” As to the particular experts that testified in the State’s case against Prade, Dr. Wright also agreed that their respective testimony was problematic. In particular, Dr. Wright noted that Dr. Thomas Marshall had testified in absolute terms that Prade was the biter, something Dr. Wright would not do, and Dr. Lowell Levine testified that Prade’s dentition was consistent with the bite mark to Margo even though he also

had admitted that he had a difficult time with the individualization of some of the characteristics he observed in the bite mark pattern.

#### Eyewitness Identification Evidence

{¶102} Dr. Charles Goodsell, an expert in eyewitness memory and identification, testified for the defense. Dr. Goodsell explained in detail how memory works and testified that many factors may affect an individual's ability to correctly recall an event, including the amount of attention the individual paid to the event, the individual's awareness of what they were witnessing at the time it happened, the amount of time the individual had to observe the event, and whether the individual was under any stress at the time the event occurred. Dr. Goodsell was unable to offer any statistics about the frequency of misidentification, but testified that misidentification is "not uncommon." According to Dr. Goodsell, of the 300 cases that the Innocence Project reported as resulting in exonerations, "faulty eyewitness testimony played a role" in "approximately 75 percent of those cases." Dr. Goodsell further testified that the confidence level of an eyewitness is "one of the most influential factors a juror will consider when considering eyewitness evidence."

{¶103} Dr. Goodsell offered several criticisms of the identifications made by Howard Brooks and Robin Husk in Prade's trial. As to Brooks, Dr. Goodsell noted that Brooks had specifically testified that he "[d]idn't pay it no attention" when he heard a car "peeling off" and that his lack of focus could have made it difficult for him to accurately store and retrieve the event. Dr. Goodsell also noted that: (1) Brooks did not know that a crime was occurring when he witnessed the car drive off, (2) he only had a limited amount of time to view the driver, (3) his view of the driver may have been obstructed by the glare of the glass between him and the driver, and (4) he did not make an identification until almost three months after witnessing the

event. According to Dr. Goodsell, all of the foregoing factors could have affected Brooks' ability to correctly commit the driver to memory and to be able to identify him later. Nevertheless, Dr. Goodsell noted that Brooks had indicated he was 100% accurate in his identification; a factor that may have influenced the jurors in their decision-making.

{¶104} As to Husk, Dr. Goodsell testified that he also was not aware that a crime would be occurring when he met a man outside the Rolling Acres Dodge dealership the morning of the murder. Dr. Goodsell also noted that: (1) there was a lengthy delay in between Husk's viewing of the man he believed to be Prade and his identification of Prade, and (2) Husk was exposed to the media reports about Prade numerous times before making his identification. Dr. Goodsell testified that, much like Brooks, Husk had been confident about his identification of Prade and his confidence level could have influenced the jury.

{¶105} On cross-examination, Dr. Goodsell admitted that it is possible for an eyewitness to be accurate, regardless of the scenario. He further admitted that he had no opinion as to whether Brooks and Husk actually had made an accurate identification. Dr. Goodsell conceded that, even though he included in his affidavit that stress affects memory, he only had a general understanding of that concept from reading literature on stress, as he never personally researched the effect of stress on memory. He also conceded that he was not aware of any statistics, regarding how often eyewitnesses are accurate in their identifications. As to Brooks' ability to accurately point out the other people who were in the parking lot of Margo's medical building on the morning of the murder, Dr. Goodsell testified that "people can be correct and they can identify people."

### **The Trial Court's Analysis & Conclusion**

{¶106} With regard to the DNA evidence, the trial court relied upon several statements from the Supreme Court’s decision in *State v. Prade*, 126 Ohio St.3d 27, 2010-Ohio-1842, wherein the Supreme Court decided that Prade had not had a definitive prior DNA test. In particular, the trial court determined that the exclusion of Prade in the underlying trial as a contributor of the DNA found on the bite mark section of Margo’s lab coat was “meaningless” because the PCR testing had excluded everyone other than Margo. *Prade* at ¶ 19. The trial court further noted that the State’s expert, Dr. Thomas Callaghan, had agreed that the bite mark section “contained the best possible source of DNA evidence as to [Margo’s] killer’s identity.” (Internal quotations omitted.) The trial court wrote that:

[f]or this [c]ourt’s analysis, it is undisputed that (1) Dr. Prade’s killer bit her on the left underarm hard enough to leave a permanent impression on her skin through two layers of clothing; [and] (2) her killer is highly likely to have left a substantial quantity of DNA on her lab coat over the bite mark when he bit Dr. Prade \* \* \*.

The court also took as undisputed that DDC’s testing had uncovered at least two partial male profiles within the bite mark section and that Prade was definitively excluded as a contributor of either profile.

{¶107} Based on all the DNA evidence the trial court received, the court made six specific findings. Specifically, the court found that: (1) it was “far more plausible that the male DNA found in the bite-mark section \* \* \* was contributed by the killer” than anyone else because “saliva is a rich source of DNA material, while touch DNA is a weak source”; (2) there was a low probability of contamination because four other sections of the lab coat had been tested and failed to find any male DNA; (3) the State’s suggestions as to the sources of possible contamination were “highly speculative and implausible”; (4) the small quantity of DNA that DDC found did not affect the reliability of the profiles it had obtained; (5) the small quantity of

DNA that DDC found was attributable to different agencies having handled the bite mark section and to the passage of time; and (6) Prade was conclusively excluded as the contributor of any of the male DNA found on the lab coat. Later in its entry, the court wrote that it was not convinced that the DNA results were “meaningless due to contamination, transfer touch DNA, or analytical error.” The court specified that “the more probable explanations for the low level of trace male DNA found on the bite-mark section of the lab coat are due to natural deterioration over the years, and to the testing of the saliva DNA from the bite-mark section of the lab coat back in 1998.” The court also wrote that “[t]he saliva from those areas was consumed by the testing procedure, and unfortunately, these areas cannot be retested at this time.”

{¶108} With regard to the bite mark identification evidence, the trial court determined that “[b]ite mark evidence \* \* \* provided the basis for the guilty verdict” on Prade’s aggravated murder count. (Emphasis omitted.) The trial court noted that neither Dr. Bush, nor Dr. Wright had tendered an opinion with regard to the specific bite mark left on Margo, but that both had criticized either the science behind bite mark identification or the bite mark identification testimony that had been admitted at Prade’s trial. The trial court determined that “both experts’ opinions call into serious question the overall scientific basis for bite-mark identification testimony.” Consequently, the court determined that the evidence presented at the PCR stage would cause the jurors from Prade’s trial to “reconsider the credibility of the respective bite mark experts[]” who testified at trial.

{¶109} With regard to eyewitness identification, the trial court noted that the testimony of both Brooks and Husk was problematic, given the length of time that had elapsed before either man identified Prade. Based on the testimony of Dr. Goodsell, the court determined that a number of factors could have adversely affected Brooks’ and Husk’s ability to accurately recall

the events of that day. Consequently, the court concluded that “[b]ased upon the Y-STR DNA test results, and after reviewing Dr. Goodsell’s testimony and affidavit, the [c]ourt believes that a reasonable juror would now conclude that these two witnesses were mistaken in their identification of [Prade].”

{¶110} As to the evidence that was presented at Prade’s trial, the trial court noted that all of the evidence was circumstantial in nature. The court acknowledged that there was testimony that Prade had called Margo a “slut” and that his behavior had both upset Margo and caused her to be afraid, but wrote that, in the court’s experience, “friction, turmoil, and name calling are not uncommon during divorce proceedings.” The court also acknowledged that there were problems with Prade’s alibi and that the State had presented a financial motive for murder in the form of numerous debts and evidence that Prade may have subtracted his outstanding debts from the amount of Margo’s life insurance policy before her murder. Nevertheless, the court wrote that the defense had presented evidence that Prade was not having financial problems and that the subtractions Prade made from the insurance policy were performed after Margo’s death. The court ultimately concluded it was unclear “[t]o what extent the jury was swayed by [the] circumstantial evidence.”

{¶111} After discussing all of the foregoing evidence, the trial court concluded that Prade had established actual innocence by clear and convincing evidence. The court wrote:

The [] circumstantial evidence remains tenuous at best when compared to the Y-STR DNA evidence excluding [Prade] as the contributor of the male DNA on the bite mark section of the lab coat or anywhere else. The accuracy of the two eyewitnesses’ testimony at trial remains questionable. The remaining evidence – the testimony by friends and family of Dr. Prade’s that she was in fear and/or mistreated by [Prade], the arguably faulty alibi and the deposit slip – is entirely circumstantial and insufficient by itself to support inferences necessary to support a conviction for aggravated murder.

The court concluded that “[b]ased on the review of the conclusive Y-STR DNA test results and the evidence from the 1998 trial, the [c]ourt is firmly convinced that no reasonable juror would convict [Prade] for the crime of aggravated murder with a firearm.”

### **This Court’s Analysis & Conclusion**

{¶112} This Court has conducted an exhaustive review of the record in this matter and has arrived at several conclusions. First, we conclude that, while the results of the post-1998 DNA testing appear at first glance to prove Prade’s innocence, the results, when viewed critically and taken to their logical end, only serve to generate more questions than answers. Second, we conclude that the State presented a great deal of evidence at trial in support of the guilty verdicts in this case. Third, we conclude, consistent with our precedent, that the jury was in the best position to weigh the credibility of the eyewitnesses and to decide what weight, if any, to accord the individual experts who testified at Prade’s trial. Finally, we conclude that, having reviewed all of the evidence in this matter, the trial court abused its discretion when it granted Prade’s PCR petition.

{¶113} Without a doubt, Prade was excluded as a contributor of the DNA that was found in the bite mark section of Margo’s lab coat. The DNA testing, however, produced exceedingly odd results. Of the testing performed on the bite mark section, one sample (19.A.1) produced a single partial male profile, another sample (19.A.2) produced at least two partial male profiles, and a third sample (111.1) failed to produce any male profile. All of the foregoing samples were taken from within the bite mark, some directly next to each other, but each sample produced completely different results. Meanwhile, the testing performed on four other areas of the lab coat also failed to produce any male profiles.

{¶114} There was a great deal of testimony at the PCR hearing that epithelial cells from the mouth are generally plentiful. Indeed, Dr. Maddox testified that buccal swabs from the mouth are the preferred method for obtaining DNA standards from people due to the high content of cells in the mouth and that, because a buccal swab typically contains millions of cells, it is usually necessary for BCI to either take a smaller cutting or to dilute a sample so that its testing equipment can handle the amount of DNA that is being inputted for testing. Dr. Benzinger testified that the ideal amount of cells for DNA testing is about 150 cells and that the threshold amount for testing is about four cells. There is no dispute that the testing that occurred here was at or near the threshold amount. Specifically, Dr. Benzinger testified that 19.A.1 only contained about three to five cells and 19.A.2 only contained about ten cells. Thus, despite the fact that there are usually millions of cells present when the source of DNA is a person's mouth, the largest amount of DNA located here was ten cells. Moreover, those ten cells were not from the same contributor.

{¶115} When DDC tested 19.A.2, it discovered at least two partial male profiles. More importantly, the major profile that had emerged when DDC tested 19.A.1, *was different than the major profile that emerged when DDC tested 19.A.2*. While the results from 19.A.1 showed a 15 allele at the DYS437 locus, the results from 19.A.2 showed a 14 allele at the DYS437 locus, with the 15 shifting to a minor allele position that fell below DDC's reporting threshold. Thus, in addition to the fact that two different partial profiles emerged in DDC's tests, the major profile that emerged *was not consistent*. It cannot be said, therefore, that even though multiple profiles were uncovered, there was one consistent, stronger profile that emerged as the profile of the biter.

{¶116} The inconsistency in the major profile in DDC’s tests calls into question several of the conclusions that Prade’s DNA experts made. For instance, Dr. Heinig stated:

[B]ased on everything that I’ve testified [to], I believe that the major DNA that we obtained from [19.A.2] is very likely from the saliva, and that if there is contamination the minor alleles, for instance, could be from contact from another individual or more than one individual \* \* \*.

Because the minor allele in 19.A.2 was the major allele in 19.A.1, however, it is difficult to understand how Dr. Heinig could distinguish between the two and rely on one as “the major DNA” while attributing the other to contamination. Similarly, Dr. Straub testified that he felt “that the biting activity should leave a lot more cellular material than touch would; and, therefore, if they’re getting any result, now certainly some of that should be from the biting event.” Yet, DDC did not find “a lot more cellular material” from one profile. Instead, it uncovered *inconsistent major profiles within an extremely low amount of DNA cells*.

{¶117} Another significant reality about the bite mark section of Margo’s lab coat is that amylase testing resulted in a negative test result. Even back in 1998, therefore, it was determined that *no amylase (saliva) was present on the bite mark section*. That fact rebuts any assertion that there was a “slobbering killer.” It also undercuts the assumption made by both the defense witnesses and the trial court that there had to be DNA from the biter on the lab coat due to the large amount of DNA in saliva. Quite simply, there was never a shred of evidence in this case that the killer actually deposited saliva on the lab coat. Even back in 1998, Dr. Callaghan testified that “if someone bites someone else or that fabric, they *may have* left DNA there. It can be of such a low level that it’s not detected. *Or they may have left no DNA there.*” (Emphasis added.) The only enzyme test conducted to determine whether saliva was present, the amylase test, was negative. And while the preliminary test showed probable amylase activity, Dr. Benzinger specified: “[i]f the confirmatory test is negative, then your results are negative.”

{¶118} Although the trial court rejected the State’s contamination theories as “highly speculative and implausible,” the results of the DNA testing speak for themselves. The fact of the matter is that, while it is indisputable that there was only one killer, at least two partial male profiles were uncovered within the bite mark. Even Dr. Heinig admitted that, for that to have occurred, there had to have been either contamination or transfer. And, while the lab coat itself was not contaminated, as evidenced by the negative results obtained on the four other locations cut from the coat, the inescapable fact, once again, is that the bite mark section itself produced more than one partial male profile. Whatever the explanation for how more than one profile came to be there, the fact of the matter is that the profiles are there.

{¶119} Both the defense experts and the trial court concluded that the only logical explanation for the low amount of DNA found in the bite mark section was that a substantial amount of the biter’s DNA was lost due to the various testing that occurred over the years and/or the DNA simply degraded with time. Dr. Straub, in particular, deemed it “somewhat far-fetched and illogical” to suggest that all of the partial profiles DDC discovered came from people other than the biter. To conclude that one of the partial profiles DDC discovered belonged to the biter, however, one also must employ tenuous logic. That is because the three to five cells from 19.A.1 uncovered one major profile, and the ten cells from 19.A.2 uncovered a different major profile and at least one minor profile. The total amount of cells for each major profile, therefore, had to be very close in number. For one of those major profiles to have been the biter, that DNA would have had to either degrade at exactly the right pace or have been removed in exactly the right amount to make it mirror the transfer/contamination DNA attributable to the other partial profile(s) DDC found. It is no more illogical to conclude that all the partial profiles DDC discovered were from transfer/contamination DNA, than it is to conclude that degradation or

cellular loss occurred to such a perfect degree. The former conclusion also comports with both Drs. Maddox and Benzinger's opinion that "[t]he presence of multiple low-level sources of DNA is most easily explained by incidental transfer."

{¶120} As previously noted, there is no dispute that Prade was definitively excluded as the source of the partial male profiles that DNA testing uncovered. The problem is, if none of the partial male profiles came from the biter, that exclusion is meaningless. Having conducted a thorough review of the DNA results and the testimony interpreting those results, this Court cannot say with any degree of confidence that some of the DNA from the bite mark section belongs to Margo's killer. Likewise, we cannot say with absolute certainty that it does not. For almost 15 years, the bite mark section of Margo's lab coat has been preserved and has endured exhaustive sampling and testing in the hopes of discovering the true identity of Margo's killer. The only absolute conclusion that can be drawn from the DNA results, however, is that their true meaning will never be known. A definitive exclusion result has been obtained, but its worth is wholly questionable. Moreover, that exclusion result must be taken in context with all of the other "available admissible evidence" related to this case. R.C. 2953.21(A)(1)(b); R.C. 2953.23(A)(2).

{¶121} The amount of circumstantial evidence that the State presented at trial in support of Prade's guilt was overwhelming. The picture painted by that evidence was one of an abusive, domineering husband who became accustomed to a certain standard of living and who spiraled out of control after his successful wife finally divorced him, forced him out of the house, found happiness with another man, and threatened his dwindling finances. The evidence, while all circumstantial in nature, came from numerous, independent sources and provided answers for both the means and the motive for the murder.

{¶122} There was testimony that, even before the divorce, Prade frequently showed up in uniform when Margo went out to socialize with her friends. As their relationship soured, there was evidence that Prade progressively turned obsessive; recording Margo's phone calls, calling the babysitter to try to locate her, and going to her medical office at night. Numerous people testified that Margo was afraid of Prade and that she had never expressed a fear of anyone else. There also was testimony that Prade was verbally abusive, both before and after the divorce, and that he turned physical when the two fought, pushing Margo's head back and using his hand to "push her nose in." Moreover, there was testimony that, sometime in the months before her murder, Prade had "grabbed [Margo] by her neck and told her he'd kill her."

{¶123} In terms of the motive for the murder, there was testimony that the murder occurred around the same time that (1) Margo and Holston were contemplating marriage and children, (2) Margo planned on seeking an increase in child support, and (3) Prade's finances were in jeopardy. Because Prade still had access to the marital home and to Margo's mail, the evidence was such that he might have had knowledge of any number of Margo's plans, including her plans to modify the child support. Williams, Margo's attorney, testified that she sent Margo a letter about the filing fee for the child support modification only a few days before Margo's murder. Meanwhile, there was testimony that Prade had spent the weekend before the murder in Margo's house where he easily could have seen the letter. Williams also testified that, when she was looking for Margo's insurance papers at Margo's house on the day of the murder, Prade stated that the papers should be there because he had "just [seen] them [there] a couple days ago."

{¶124} Apart from the enormous difference in Margo and Prade's salaries, Prade admitted that he had incurred several hundred dollars in returned check and overdraft fees from

his bank in the months shortly before the murder and that, as of the day before the murder, his checkbook balance was minus \$500. Among the insurance Margo had was a \$75,000 policy for which Prade was the sole beneficiary. There was evidence that Prade had subtracted a variety of his debts from that \$75,000 policy amount on the back of a bank deposit slip dated October 8, 1997, a month before Margo's murder. And, while Prade claimed that he made those subtractions after Margo died, there was evidence that at least one of the debt amounts (the debt from Kay Jewelers) only corresponded to the amount of debt that was outstanding before the murder, not after it. Further, Margo's \$75,000 policy was set to lapse in February 1998, some three months after her murder. On the day of Margo's murder, Prade was heard saying that he had just seen Margo's insurance policies in her house "a couple days ago." Accordingly, there was evidence that Prade was not only aware of the policy, but also that the policy was set to expire in the very near future. Margo was murdered while the policy was still in effect and while Prade was in a precarious financial position.

{¶125} With regard to the murder itself, the evidence was that the murder was premeditated and very personal. Whoever killed Margo was familiar with her schedule and waited for her in the parking lot of her medical office. The killer then walked toward the van in full view of Margo and gained access to it. Because there was testimony that the van had an auto-lock feature that would have been engaged, either Margo unlocked the van doors to let the killer in or the killer had the keys to the van. As such, the evidence refuted any theory that a stranger killed Margo. Additionally, the period between which the killer entered and exited the van was brief and neither Margo's jewelry, nor her purse, were taken from the van. The evidence, therefore, supported the conclusion that Margo's killer entered her van for the sole purpose of murdering her, rather than to steal any personal items from her. Moreover, the

evidence supported the conclusion that the murder was very personal, as the attack was so brutal and thorough. In particular, the killer bit Margo forcefully enough to bruise her through two layers of clothing and shot her six times, despite the fact that either of the first two shots would have incapacitated her. The killer also pulled Margo forward forcibly enough to rip the buttons from her lab coat before discharging the last three shots.

{¶126} As for Prade’s alibi, there was evidence that the gym at his apartment was only a six minute drive from Margo’s medical office and that there would have been sufficient time for Prade to murder Margo either before or after going to the gym. Lieutenant Myers recounted how Prade relayed his whereabouts that day with eerie detail, calmly describing not only the specific content of the television program he watched while he was at the gym, but also the exact order of the exercise routine that a woman at the gym had performed. She also recounted how Prade appeared as if he had just stepped out of the shower, despite his claim that he was near the end of his lengthy workout. Further, there was evidence that Prade actively sought out the woman at the gym and asked her to provide an alibi for him, even though Lieutenant Myers had specifically instructed him not to speak to the woman. That same woman had a very well established, consistent workout routine of five to seven days a week and, if the need for an alibi arose, could have made for an ideal alibi witness.

{¶127} In its judgment entry, the trial court noted that “friction, turmoil, and name calling are not uncommon during divorce proceedings.” Friction, turmoil, and name calling, however, are distinctly different than stalking, wiretapping, arguments with physical components, and death threats. There was significant evidence that the negative situation between Margo and Prade escalated far beyond any typical divorce proceeding. Moreover, that evidence stood separate and apart from the expert testimony introduced at trial. It is wholly unclear to this Court

that “bite mark evidence \* \* \* provided the basis for the guilty verdict” on the aggravated murder count. The State presented an enormous amount of evidence in this case, and this Court cannot say that any one piece of evidence resulted in the guilty verdict. Rather, it stands to reason that all of that evidence, viewed as a whole, provided the basis for the guilty verdict.

{¶128} With regard to the bite mark identification and eyewitness identification testimony, each of the defense’s experts had critical things to say about the experts and eyewitnesses who testified at trial. This Court has repeatedly held, however, that witness and expert credibility determinations as well as the proper weight to afford those determinations fall squarely within the province of the trier of fact. *E.g.*, *State v. Browning*, 9th Dist. Summit No. 26687, 2013-Ohio-2787, ¶ 18; *Krone v. Krone*, 9th Dist. Summit No. 25450, 2011-Ohio-3196, ¶ 16. Defense counsel at trial cross-examined the eyewitnesses on the majority of the weaknesses raised by Dr. Goodsell, the eyewitness identification expert at the PCR hearing. The jury, therefore, was well aware of the possible problems with the identifications of the respective eyewitnesses and chose, nonetheless, to believe them.

{¶129} As for the dental experts, the jury was essentially presented with the entire spectrum of opinions on the bite mark at trial. That is, one expert testified that Prade was the biter, one testified that the bite mark was consistent with Prade’s dentition, but that there was not enough there to make any conclusive determination, and the third testified that Prade lacked the ability to bite anything. Moreover, the expert who definitively said Prade was the biter, Dr. Marshall, also said that the expert who determined a definitive inclusion could not be made (Dr. Levine) was “one of the leading bite[]mark experts in the country.” The jury also heard testimony during cross-examination that dental experts often disagree and that bite mark testimony has led to wrongful convictions. In short, the jury had much of the same information

before it at trial that the experts at the PCR stage presented and, in light of all that information, found Prade guilty.

{¶130} Having reviewed the entirety of the evidence, we must conclude that the trial court abused its discretion when it granted Prade’s PCR petition. Given the enormity of the evidence in support of Prade’s guilt and the fact that the meaningfulness of the DNA exclusion results is far from clear, this Court cannot conclude that Prade set forth clear and convincing evidence of actual innocence. That is, we are not firmly convinced that, given all of the foregoing, “*no reasonable factfinder* would have found [Prade] guilty.” (Emphasis added.) R.C. 2953.21(A)(1)(b); R.C. 2953.23(A)(2). As such, it was an error for the trial court to grant Prade’s petition and to order his discharge from prison. The State’s sole assignment of error is sustained.

### III

{¶131} The State’s sole assignment of error is sustained. The judgment of the Summit County Court of Common Pleas is reversed, and the cause is remanded for further proceedings consistent with the foregoing opinion.

Judgment reversed,  
and cause remanded.

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There were reasonable grounds for this appeal.

We order that a special mandate issue out of this Court, directing the Court of Common Pleas, County of Summit, State of Ohio, to carry this judgment into execution. A certified copy of this journal entry shall constitute the mandate, pursuant to App.R. 27.

Immediately upon the filing hereof, this document shall constitute the journal entry of judgment, and it shall be file stamped by the Clerk of the Court of Appeals at which time the period for review shall begin to run. App.R. 22(C). The Clerk of the Court of Appeals is instructed to mail a notice of entry of this judgment to the parties and to make a notation of the mailing in the docket, pursuant to App.R. 30.

Costs taxed to Appellee.

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BETH WHITMORE  
FOR THE COURT

HENSAL, J.  
CONCURS.

BELFANCE, P. J.  
CONCURRING IN JUDGMENT ONLY.

{¶132} I concur in the majority's judgment because I agree the trial court's judgment should be reversed, albeit for a different reason. I also concur in the majority's analysis and reasoning as to why the abuse-of-discretion standard is the appropriate standard of review.

{¶133} R.C. 2953.23(A)(2) states

Whether a hearing is or is not held on a petition filed pursuant to section 2953.21 of the Revised Code, a court may not entertain a petition filed after the expiration of the period prescribed in division (A) of that section or a second petition or successive petitions for similar relief on behalf of a petitioner unless \* \* \* [t]he petitioner was convicted of a felony, the petitioner is an offender for whom DNA testing was performed under sections 2953.71 to 2953.81 of the Revised Code or under former section 2953.82 of the Revised Code and analyzed in the context of and upon consideration of all available admissible evidence related to the inmate's case as described in division (D) of section 2953.74 of the Revised Code, and the results of the DNA testing establish, by clear and convincing evidence, actual innocence of that felony offense \* \* \*.

## Actual innocence

means that, had the results of the DNA testing \* \* \* been presented at trial, and *had those results been analyzed in the context of and upon consideration of all available admissible evidence* related to the person's case as described in division (D) of section 2953.74 of the Revised Code, no reasonable factfinder would have found the petitioner guilty of the offense of which the petitioner was convicted \* \* \*.

(Emphasis added.) R.C. 2953.21(A)(1)(b); R.C. 2953.23(A)(2).

{¶134} Thus, the trial court was charged with examining all of the available admissible evidence and then making the determination whether the defendant established by clear and convincing evidence that no reasonable factfinder would have found him guilty of the offense of aggravated murder. While I believe the trial court's reasoning process is logical, upon close examination of the journal entry, I would conclude that the trial court failed to appropriately apply the standard at issue and, thus, abused its discretion. As noted above, the trial court was required to consider whether the defendant established by clear and convincing evidence that no reasonable trier of fact would have found Mr. Prade guilty of aggravated murder in light of all the available admissible evidence and *all* of the results of the DNA testing. *See* R.C. 2953.21(A)(1)(b); R.C. 2953.23(A)(2). And while at first glance it may appear the trial court followed the standard, I would conclude that it did not actually do so. *See* R.C. 2953.21(A)(1); R.C. 2953.23(A)(2).

{¶135} Instead, it seems that the trial court *first* considered the DNA results in isolation, found that the defense DNA experts presented the more logical interpretation of the results and then took *only* the results presented by the defense DNA experts and considered that along with the trial testimony and other post-conviction relief evidence. In other words, the trial court first weighed the competing expert testimony and chose what it found to be the more reasonable expert opinion and then considered the remainder of the evidence from the perspective of a

reasonable factfinder who did not have the State's DNA expert testimony before it. Although this distinction may appear subtle, it is critical. For purposes of actual-innocence post-conviction relief, the trial court cannot make an initial determination as to which expert is more credible or believable to the exclusion of other expert opinions. Unlike the typical trial scenario where a trial court judge has discretion to select the more convincing expert, in the actual-innocence post-conviction relief scenario, the status of the evidence must mirror that which actually would be before the factfinder. Were this matter actually at trial, the trial court would not be choosing which expert it found more credible prior to sending the jury for deliberation. Rather, the jurors would be weighing the respective positions of the State and the defense along with all of the other direct and circumstantial evidence. Thus, the trial court had to put itself in the shoes of a reasonable juror who had before it *both* the State's expert testimony and the defense expert testimony adduced at the post-conviction hearing along with all of the other available evidence and then consider whether any reasonable trier of fact could have found Mr. Prade guilty of the offense. Because it is apparent that the trial court did not properly examine the evidence in this manner, I agree the judgment must be reversed. However, I do not believe this Court should undertake this analysis in the first instance and I am troubled that the main opinion's analysis is more in keeping with a *de novo* review of the matter. Therefore, I would remand the matter for the trial court to properly apply the applicable post-conviction relief standard.

{¶136} To be sure, in the post-conviction relief context this task is not easy. Moreover, it is obvious that in light of the new evidence presented, a factfinder confronted with *all* of the evidence could ultimately place less weight upon some of the circumstantial evidence that may have seemed compelling, and ultimately determinative, during the initial trial. The new DNA results obtained from Dr. Prade's lab coat definitively exclude Mr. Prade as the source of the

DNA tested; on that the experts agree.<sup>5</sup> Mr. Prade is not the source of *any* of the DNA recovered from Dr. Prade's lab coat. Moreover, the bite-mark identification testimony which was the centerpiece of the physical evidence at trial has been discredited at the post-conviction hearing. The problem is that the experts cannot agree on what the DNA results mean: Mr. Prade's experts assert that the biter's DNA was highly likely to be present in the bite-mark area tested and, if that is true, Mr. Prade could not be the biter or killer; however, the State's experts maintain that the DNA present instead likely represents incidental transfer and/or contamination and it cannot be said with any certainty whether the biter's DNA was present and tested, particularly in light of the all the prior testing and the passage of time. However, as pointed out by Dr. Benzinger, forensic DNA experts do not provide opinions as to how or when DNA was deposited, rather, the experts report the facts concerning the DNA itself. In that regard, all of the experts agree that Mr. Prade is definitely excluded as the contributor of any DNA tested from the bite-mark area.

{¶137} The trial testimony established that the person who bit Dr. Prade went through two layers of clothing that resulted in leaving a bite-mark impression on her skin. It was the State's position at trial that Dr. Prade's killer made the bite mark, a position that was at the heart of its case given its argument that the bite mark itself matched Mr. Prade's dentition. At the post-conviction hearing, the defense experts opined that, given that it is presumed that the killer bit Dr. Prade, and that biting someone should leave saliva behind (which is an abundant source of DNA), it is highly likely that at least some of the DNA recovered from the bite-mark area would be from the killer. Dr. Straub agreed with trial experts that whoever made the bite mark

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<sup>5</sup> In addition, Mr. Prade was excluded as a source of DNA on the fingernail clippings taken from Dr. Prade.

would have had to leave a crucial amount of cellular material on the area and further concluded that a forceful bite would be highly likely to leave enough DNA to be recoverable 14 years later. Dr. Heinig also agreed that a hard bite mark would likely leave enough DNA on fabric so that, in later conducting Y-STR testing, DNA from the biter could be detected. Dr. Maddox, one of the State's experts stated that he could not rule out the possibility that some of the DNA in the sample did come from the person who bit Dr. Prade. Accordingly, the defense argued that the State's absolute position that *all* of the DNA present must have come from a weaker source of DNA (i.e., transfer and/or contamination) rather than the undisputedly stronger source (i.e., saliva from the biter) was illogical, unreasonable, and highly speculative.<sup>6</sup>

{¶138} During the hearing, there was much debate about whether there was amylase (a component of saliva) present when the FBI began its testing in 1998. From the State's perspective, the absence of amylase bolstered its position that the source of the DNA on the bite mark was not from the biter, but from contamination. The defense experts explained that the absence of amylase in the confirmatory test did not necessarily mean that saliva had not been present in the area. Instead, the absence of amylase in the subsequent confirmatory test performed by the FBI in 1998 could have been due to the treatment of the fabric which removed the amylase present such that the confirmatory test would have been negative. Notwithstanding, there was testimony that, because saliva is a rich source of DNA, the inability to confirm the presence of amylase through amylase mapping did not mean that DNA from the cells in the saliva would not be recoverable from the area.<sup>7</sup>

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<sup>6</sup> As an example, Dr. Maddox theorized that Dr. Prade's patients could have sneezed on her thus depositing some DNA on her lab coat while the defense pointed out that there was absolutely no evidence suggesting this occurred.

<sup>7</sup> The defense also presented a letter from the Ohio Attorney General's office authored prior to the DNA testing describing State expert Dr. Benzinger's belief that (1) the absence of a

{¶139} The State’s experts also questioned the reliability of the DNA testing results due to the low number of cells that were tested. However, the experts agreed that small quantities of DNA do not preclude DNA testing and an exclusion is not necessarily unreliable simply because there are fewer cells to test. Despite the low number of cells, the testing results that were relied upon contained DNA amounts that were above the threshold necessary to obtain a reliable result. It was further established that a reliable exclusion could be established with a partial profile. The State also argued that the low number of cells supported the theory that the DNA that was present was not from the biting killer but rather from random sources or contamination. However, the defense experts explained that the low quantity of DNA could be due to all the other testing (DNA, blood, and amylase) that had occurred resulting in a significant loss of some of the DNA and the substantial amount of Dr. Prade’s blood on the coat which also could have impacted the amount of recoverable DNA. In addition, degradation of the DNA could have taken place over the passage of time. Moreover, the defense experts did not dispute the existence of two partial male profiles, but instead noted that samples containing more than one DNA profile are quite common. Further, because incidental transfer DNA is likely to be found in a smaller amount and is a weaker DNA source, it would be reasonable to conclude that DNA that was capable of being recovered after all this time was more likely to be from the biter (who would have likely deposited a much larger quantity of DNA than someone who just touched Dr. Prade). In this regard, defense testimony indicated that “drop in”<sup>8</sup> contamination is very

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confirmatory test for amylase did not eliminate the ability to find DNA and (2) that it was much more likely to find identifiable DNA from saliva than from someone simply touching the coat because saliva contains much greater quantities of DNA than skin cells which might flake off due to touching an article of clothing.

<sup>8</sup> This occurs where an allele that is not supposed to be in a profile spontaneously appears in amplification because of contamination.

uncommon. Moreover, while multiple theories were offered by the State as to how contamination could have occurred, the defense experts rebutted these theories.<sup>9</sup>

{¶140} With respect to the bite mark left on Dr. Prade's skin, at trial there were differing opinions by the three experts. The defense expert at the post-conviction relief hearing maintained that there is not enough scientific evidence to demonstrate that human dentition is unique enough for bite-mark identification evidence to be reliable. The State's post-conviction hearing expert did not agree on that particular point but nonetheless cast doubt upon the expert testimony at trial as well as whether any bite-mark identification testimony was appropriate in this case. He acknowledged that the bite-mark testimony at the trial was problematic and that he would not have testified that Mr. Prade was definitively the biter. In addition, the State's expert noted that bite-mark evidence should not be the sole evidence used to identify a suspect and that bite-mark testimony had helped to convict people who were later exonerated. Thus, while the three experts at trial were divided as to whether Mr. Prade could have made the bite mark, the evidence at the post-conviction relief hearing would likely only further call into question the experts at the trial who maintained that Mr. Prade was, or could have been, the biter on the basis of bite-mark identification.

{¶141} Also at the post-conviction relief hearing, the defense presented an expert on eyewitness identification, who pointed out the problems with the identifications made by Mr. Husk (the man from the dealership) or Mr. Brooks (the man outside Dr. Prade's medical office). For example, there was a lengthy delay from when Mr. Husk first viewed the person he later

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<sup>9</sup> For example, the State argued that displaying the lab coat at trial could have led to contamination. However, the defense pointed out that this was not possible because the sample had been removed from the coat. In addition, the State was granted leave by the trial court to test the lab coat for contamination; however, no DNA was found anywhere on the lab coat around the areas of the bite mark.

identified as Mr. Prade and when he actually identified Mr. Prade as the man he saw. With respect to Mr. Brooks, the defense expert noted that Mr. Brooks did not have much time to see the driver of the car and his view of the driver may have been obscured. In addition, Mr. Brooks did not immediately identify Mr. Prade as the man he saw when questioned by police but identified him only after his third meeting with police some three months after the murder after much publicity about the murder in the media. Additionally, the expert pointed out that the jury could have been swayed towards believing the eyewitnesses given the certainty they expressed concerning their identifications. In addition, the expert testified that faulty eyewitness identification is not uncommon; he indicated that approximately 75% of the Innocence Project's 300 exonerations involved misidentification by eyewitnesses.

{¶142} Assuming this expert's opinion would give a factfinder pause about the testimony of those two eyewitnesses, it might likewise cause a juror to be more apt to find the identification made by the woman from Mr. Prade's gym to be more reliable in light of the fact that she had the opportunity to see him for a longer period of time. She testified that Mr. Prade entered the gym partway through her routine and that she could have arrived at the gym anywhere from 8:30 a.m. to 9:30 a.m. to start her 30 minute workout. If she in fact arrived later, for example around 9:00 a.m., Mr. Prade would have been at the gym at the time Dr. Prade was killed.

{¶143} Nonetheless, as noted above, the State also presented evidence at the post-conviction relief hearing which offered a different explanation concerning the significance of the DNA evidence. The State's experts pointed out that the amount of DNA actually recovered from the bite-mark area was quite small, which would not be expected in an area that was bitten and covered in saliva. The State's experts noted that the passage of time and the number of people that handled the lab coat could support the conclusion that the DNA found represented

contamination and/or incidental transfer as opposed to DNA from the biter. They testified that there was more than likely some level of incidental transfer/contamination because two partial male DNA profiles were recovered from at least one of the samples. One of the State's experts, in discussing the sample containing the two partial male profiles, noted that there was not a major difference in the strength of the major and minor profile obtained; thus, the expert indicated that this was more likely to represent incidental transfer/contamination, as he would expect a stronger profile if it was DNA from the biter. With respect to the amylase testing, the State's experts indicated that the fact that the presumptive test was positive but the confirmatory test was negative supported the conclusion that the amount of cells even originally deposited was very low. Moreover, the portions of the lab coat that presumptively tested positive for amylase were consumed in the subsequent PCR DNA testing,<sup>10</sup> which was conducted prior to the availability of Y-STR DNA testing; therefore, the portions of the coat most likely to contain the killer's DNA were not even tested specifically for the presence of male DNA. Overall, given that the forensic experts do not opine as to when or how DNA is deposited, the one certainty agreed upon by the State and defense is that the DNA recovered was not Mr. Prade's.

{¶144} The trial record in this case is voluminous as is the record of the post-conviction proceeding. This court should not undertake a de novo review of the evidence nor impose its own reasoning process upon the trial court. The abuse-of-discretion standard of review by its very nature permits a trial court to exercise discretion in making a determination so long as the exercise of its discretion is not unreasonable, arbitrary, or unconscionable. An appellate court may not impose its own choice when reviewing the trial court's exercise of discretion but instead

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<sup>10</sup> The PCR testing recovered only Dr. Prade's DNA.

must evaluate whether the determination that was a product of the exercise of discretion was one that was within the permissible range of choices available to the trial court.

{¶145} At Mr. Prade's 1998 trial, there was no DNA evidence that definitely excluded him as the source of DNA on the bite mark, and instead there was at least one bite-mark expert who opined that Mr. Prade was definitely the biter who made the bite mark on Dr. Prade's arm.<sup>11</sup> In 2014, there is DNA evidence obtained from the bite mark that all experts agree definitely excludes Mr. Prade, and the bite-mark identification evidence has been severely discredited. The question presented is whether a reasonable factfinder would find Mr. Prade guilty of aggravated murder when faced with evaluating the competing opinions of the State and defense DNA experts, all of the additional post-conviction evidence, and all of the trial evidence. As the trial court did not properly consider this question, I would reverse and remand the matter for the trial court to closely examine all of the evidence and apply the standard appropriately in the first instance. In light of the foregoing, I concur in the judgment of the majority but would also remand the matter for further consideration.

APPEARANCES:

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<sup>11</sup> It is unlikely that a reasonable juror would find that same expert credible in light of the fact that the State's expert at the post-conviction relief hearing was critical of, and troubled by, that expert's definitive conclusion that Mr. Prade was the biter. Moreover, even the credibility of the expert at trial who concluded that the bite mark was consistent with Mr. Prade's dentition was called into question by the State's bite-mark expert during the post-conviction relief proceedings.