

IN THE SUPREME COURT OF IOWA

No. 14-1623

Filed May 20, 2016

Amended August 17, 2016

GLENDALE MORE JR.,

Appellant,

vs.

STATE OF IOWA,

Appellee.

On review from the Iowa Court of Appeals.

Appeal from the Iowa District Court for Scott County, Stuart P. Werling, Judge.

An applicant for postconviction relief requests further review of a court of appeals ruling affirming a district court decision denying his application for relief. **AFFIRMED.**

Martha M. McMinn, Sioux City, for appellant.

Thomas J. Miller, Attorney General, Sheryl A. Soich, Assistant Attorney General, and Michael J. Walton, County Attorney, for appellee.

APPEL, Justice.

A jury convicted Glendale More Jr. of first-degree murder in connection with the death of his girlfriend, Wauneita Townsend. In the present action for postconviction relief, More asserts that he is entitled to a new trial because at his trial the State introduced expert witness testimony on Compositional Bullet Lead Analysis (CBLA). More asserts that recent scientific developments have discredited CBLA and that as a result of these new developments, he is entitled to a new trial. He also alleges that the use of CBLA testimony violated due process under both the State and Federal Constitutions by depriving him of a fair trial.

The district court denied relief. The court of appeals affirmed. We granted further review. For the reasons expressed below, we affirm.

I. Factual and Procedural Background.

A. Trial Proceedings. The case against More came to trial in February 1984. The trial record shows that Wauneita Townsend was found dead in her car in a Davenport auto dealership parking lot on August 28, 1983, at 5:34 p.m. She had been shot twice, including one fatal shot to her head. The car had been set on fire with paint thinner used as an accelerant. Fresh groceries and a shopping receipt time-stamped 4:37 p.m. were found in the trunk of the car. Two bullets were recovered from the crime scene—one from the victim's head and one that traveled through her body and became embedded in the roof of the car. More's fingerprints were found on the back hatch of the car and on a pop can in a litter bag inside the car.

Prior to her death, Townsend was in a relationship with More. More did not have full-time regular employment but at trial indicated he had been involved in a range of activities including contracting,

carpentry, real estate, heavy equipment operation, and gem and jewelry sales.

In the mid-1970s, More was employed by a railroad company when he suffered a work-related injury for which he received a financial settlement. He also received a lump sum insurance payment and periodic disability payments arising from a hunting accident that led to the amputation of his left leg. In addition, he received a \$19,000 insurance payment related to property damage caused by a fire.

More and his first wife, Bernadette, divorced in 1974. More first met Townsend while he was employed by the railroad around 1975 or 1976. The two discussed marriage in 1976, but More left Townsend abruptly. He married his second wife, Norma, in 1977, but the marriage shortly ended in divorce. He married Norma again in 1979, but his second marriage to her also ended in divorce in 1983. More and Townsend rekindled their relationship beginning in 1983, after More had separated from Norma and initiated divorce proceedings.

In February 1983, More began living in Townsend's residence in Bettendorf on a semi-regular basis until her death. While living with Townsend, More traveled frequently for business and personal reasons; he estimated that he actually was at home about fifty percent of the time—the rest of the time he was usually in the Golconda area of Illinois, where he stayed with family. While still in a relationship with Townsend, More encountered his first wife, Bernadette, during a visit to Golconda. More was surprised that Bernadette had changed her opinion of him since their divorce but said that the encounter did not change his feelings toward Townsend.

More and Townsend began to discuss marriage again in 1983. In May 1983, the two purchased life insurance policies with a \$100,000

death benefit. More was a fifty percent beneficiary of Townsend's policy with the remaining half to her daughters. Townsend was the sole beneficiary of More's policy. Townsend later told her two teenaged daughters about the life insurance policies at a donut shop after attending church on August 28, the day of the murder.

In early 1983, a bank had requested More to sell certificates of deposit that he owned to pay off certain promissory notes. More cashed the certificates, but a loan balance remained. In July, More had loans that were delinquent. On August 1, More borrowed \$3500 against his car to raise some of the needed funds.

The relationship between More and Townsend was not entirely smooth in 1983. Townsend told a close friend after Townsend and More had returned from a trip to Missouri that her problems with More were "insurmountable." Townsend told her friend that she had decided that the relationship was "not going to work." Townsend told her friend that she was "going to need some help in telling him."

On August 28, the night of the murder, police arrived at the crime scene at about 5:25 p.m. and commenced their investigation. At 9:40 p.m., authorities were preparing to notify Townsend's family when they received a call from More. More said he had been watching television with Townsend's daughters when they saw a news flash about the murder and recognized Townsend's car. The police informed More that Townsend was dead.

The police asked More to come to the station and speak with them that evening. At the station, More told the police that he arrived in the Quad Cities and helped Townsend load groceries into the back of her car earlier that day. More told police he then left because he had seen a sign in Illinois advertising real estate for sale. He wished to write down the

contact information because he was interested in purchasing the real estate. More informed police that he told Townsend he would be back in time for dinner. More received a traffic citation for driving at seventy-three miles per hour at 5:45 p.m. that evening in Illinois driving away from the Quad Cities.

On his way back from Illinois, More explained, he experienced car trouble and attempted to call Townsend to tell her that he was going to be late getting back for dinner. Townsend's daughter answered the phone, however, and told More that her mother had not as yet returned home. Townsend's daughters were worried about their mother's absence, but More did not mention to them that he had seen Townsend at the grocery store earlier that afternoon. More gave police a receipt from the gas station where he made the call. More got home to Bettendorf sometime between 8:00 p.m. and 9:00 p.m.

At some point in the interview with police, More declared he thought he was having a heart attack. Police called an ambulance, and he was taken to the hospital. In the ambulance, More said the chest pain was gone. When he arrived at the hospital, he refused to speak to anyone. The doctors examined More and did not find any physical abnormality.

Early in the morning of August 29, a court ordered a psychiatric evaluation of More. As part of his intake to the psychiatric unit, a psychiatric nurse searched More's clothing and found a .38 caliber bullet in his pocket. The bullet was turned over to the police. More spoke with the psychiatrist. The psychiatrist later reported that More was not suffering from a psychotic disorder and that he appeared to be voluntarily exaggerating symptoms. More's ex-wife, Bernadette, along with More's cousin, picked More up at the hospital.

After More went to the hospital, police, with More's consent, searched Townsend's house. In the house, police found an extensive collection of firearms and ammunition in More's room at the residence, including a dozen long guns and two handguns. In addition, trial testimony indicated More had owned and had displayed other hand guns not uncovered at the residence. Some of the ammunition found was the same caliber as the bullets recovered from the crime scene.

On August 30, police interviewed More again. Police asked More whether he would receive any kind of monetary benefit from Townsend's death. Specifically, police asked if he would receive benefits from a life insurance policy. More generally denied that he would profit, and he said specifically that he was not a beneficiary of a life insurance policy. More would later describe this interview as "intense" and claim that accusations were leveled against him. More terminated the interview, telling police if they wanted to find him he would "be in the Vet's Hospital in Illinois." After the interview, More and Bernadette left the Quad Cities, traveling first to Illinois and then to Kentucky.

More did not attend Townsend's funeral. He claimed that he did not know the time of the funeral. He was further concerned about police interest in him. After he left the Quad Cities, he called Townsend's teenaged children from Illinois "to find out how they were doing." As part of their investigation, police attempted to locate the real estate sign that More said he saw in Illinois, but they did not find it.

Three days after the murder, More was still in the company of his ex-wife, Bernadette. They stayed together in a motel in Kentucky. More introduced Bernadette to motel staff as his wife. Following that, More traveled through numerous other states, including Florida, Texas, and Montana, among many others. More said he learned from a lawyer in

Illinois that a warrant was issued for his arrest while he was traveling in the west, probably Wyoming or Montana. He did not turn himself in right away, however, because he wanted to visit a friend and one of his sons. More was arrested in late September in Red Lodge, Montana. At the time of his arrest, his car was completely full except for the driver's seat—the car was loaded down with items such as clothing, maps, newly purchased camping equipment, and a bullet-proof vest.

At trial, the State offered the above circumstantial evidence. It also offered the testimony of Jeffrey Elmore, who was thirteen at the time of the crime. On the date of the murder, Elmore had run away from the Quad City Children's Center, where he was held under an order of the juvenile court. Elmore testified that he was in the auto dealer parking lot contemplating stealing a car. He testified that he heard "two big booms" coming from a white car and saw a man with a limp appear to set fire to the vehicle. He identified the clothing worn by More. He also said that he slipped on some gravel which made a noise and that the person who set fire to the car shined a flashlight under cars looking for him. Elmore testified that the person then placed the flashlight in a ring-type holder attached to his belt or waist. At trial, Elmore identified More as the person who set the fire.¹

¹The validity of Elmore's in-court identification is not at issue in this case. We have noted, however, that such identification may be so suggestive as to be impermissible. See *State v. Folkerts*, 703 N.W.2d 761, 765 (Iowa 2005); Gary L. Wells & Deah S. Quinlivan, *Suggestive Eyewitness Identification Procedures and the Supreme Court's Reliability Test in Light of Eyewitness Science: 30 Years Later*, 33 *Law & Hum. Behav.* 1, 8, 15 (2009); see also Evan J. Mandery, *Due Process Considerations of In-Court Identifications*, 60 *Alb. L. Rev.* 389, 389 (1996). Even without the in-court identification, however, Elmore provided significant evidence supporting the prosecution, including his observation that the person at the crime scene walked with a limp.

On cross-examination, Elmore admitted that he was a juvenile offender on probation and that he failed to identify More in a pretrial lineup and during interrogation at the Davenport police station. He admitted that he likes to give answers that he thinks people want to hear. He also said that when he initially spoke with detectives, he did not remember saying that the man he saw had a beard or that the man wore glasses, both details which he later recounted.

The psychiatrist and a nurse testified regarding More's status after he arrived at the hospital on August 28. The psychiatrist declined to testify as to the content of his conversation with More but did describe the results of his physical and psychological assessment. The psychiatrist testified that he could find no pertinent physical problems or any evidence of a serious nervous disorder and that "it appeared . . . [More] was producing voluntarily some very exaggerated symptoms which seemed . . . understandable in view of the circumstances." The nurse testified that tests eliminated serious heart problems and that More refused to respond to medical personnel.

The trial also featured experts who testified about the relationship between the bullets found at the crime scene and the cartridge found in More's pocket. These experts battled about whether the characteristics of the bullets at the crime scene and the cartridge in More's pocket at the hospital could be linked in any meaningful manner.

William Albright, an FBI specialist in firearm identification, told the jury that he analyzed the two bullets recovered from the crime scene. He could not determine whether they were fired from the same gun, but the bullets had similar features. Albright stated that a Ruger handgun recovered from the Townsend residence that belonged to More was not the gun that fired the shots that killed Townsend. He found no gunshot

residue on various articles of clothing worn by More but indicated that he did not regard that finding as significant.

Special Agent Roger Asbury of the FBI testified about the FBI's CBLA tests on the bullets and cartridge. Asbury testified that the FBI used neutron activation analysis to perform an elemental analysis which measured the amount of antimony, copper, and arsenic mixed in with the lead. Asbury explained that within a box of cartridges, there are usually between one to three different elemental composition groups. He stated that if he tested bullets or fragments from a crime scene and found that they had the same elemental compositions groups as the unfired cartridges associated with a suspect, they "matched." If they matched, he would expect that both the bullets and the cartridges came from the same box.

Asbury acknowledged that "a box of cartridges does not have a unique composition that makes it different from every other box in the world" but that it would be very unlikely to find a match in elemental composition from one specific bullet and any box of cartridges that one could randomly buy off the shelf. "It's quite rare," Asbury testified, "for us to find a match in a case we're working now with a case that we worked six months ago or a year ago in composition."

With respect to the bullets in More's case, Asbury testified that he took three samples each from three bullets, one removed from Townsend, one removed from the car in which she was found, and the third from the cartridge that the nurse found in More's pocket. He stated that he found that the three bullets had matching compositions and that it was his opinion that "because of this match, . . . these items certainly could have originated from the same box of cartridges due to their composition. It

would be what I would expect to find among bullets originating from the same box of cartridges.”

More’s attorney cross-examined Asbury on the bullet manufacturing process, with the point that a great many bullets could match one another in elemental composition. For example, More’s attorney asked,

[I]f those boxes of cartridges have been loaded from a source of bullets that is random in the way the lead source is mixed, is it not just as likely that the same composition will be found in some other box of bullets anyplace in the U.S.A.?

Asbury replied, “Well, I simply say we don’t see that, sir. We simply don’t see that.” *Id.* Asbury continued that bullets identical in composition tend to be distributed in sequence and in the same geographic region, even from a national supplier of bullets.

More offered testimony from Steven Morris, a chemist at the University of Missouri, to counter Asbury’s testimony. Morris testified that his lab would test metal from crime scenes in order to identify bullet lead as opposed to some other type of metal, such as an iron compound from a hatchet or knife, and that would be the way “that neutron activation analysis can be used and it is useful.” When asked if the technique could identify whether three separate bullets came from a common source, Morris declared, “[I]t would be my opinion that neutron activation analysis as it’s applied today would not be a suitable technique for that purpose.” He testified that his lab had considered whether neutron activation analysis could be a suitable forensic tool for comparing bullets in 1973 and 1974 after hearing about it at a conference but “reached the conclusion then that it was not practical to compare bullet lead” and that his colleagues in forensic chemistry agreed.

On cross-examination, the State's attorney asked Morris about his familiarity with the FBI's forensic process with neutron activation analysis. Morris replied, "I have no quarrel with the analysis . . . just interpretation." The State's attorney then asked Morris whether he knew if the FBI had databases that could aid the FBI in making bullet comparisons, and Morris stated that he did not know or expect that they did but that good scientists keep notes.

More took the stand in his own defense. He denied committing the murder. He reiterated that on the day of the murder, he returned to Illinois after helping Townsend load groceries to write down a phone number from a real estate for-sale sign. He asserted he was late in returning to the Quad Cities as a result of car trouble. When asked where the cartridge found in his pocket by medical personnel came from, More testified, "I have no idea." He stated he did not attend Townsend's funeral because he did not know when it was and because he was apprehensive in light of law enforcement's interest in him as a suspect.

In his closing argument, the State's attorney strongly implied that Morris was dismissing the FBI's work with CBLA because of academic elitism. The State's attorney said,

[Morris] decided, along with some other scientists, that the F.B.I. doesn't know what they're doing, so they quit exploring the area. . . . [The FBI has] been doing it a long time. . . . You saw Mr. Asbury is confident in his statement. He says the bullets match.

The jury found More guilty of murder in the first degree on March 2. More filed a posttrial motion in arrest of judgment and for a new trial on March 14, claiming that his right to a fair trial and due process was violated by the admission of doctor-patient privileged communication and that More should have been allowed to impeach

Elmore on his juvenile charges of burglary, theft, and arson, for which he was in State custody at the time of trial, among other grounds. The trial court denied the motion, stating that the motion only reiterated matters already ruled upon at trial. After the denial of posttrial motions, More was sentenced to life in prison on March 19, 1984.

On August 1, More moved for a new trial on the basis of newly discovered evidence, namely the sign advertising real estate in Illinois which formed the basis of his alibi defense. With his motion, More presented an affidavit from a landowner near Peoria, Illinois, who stated that he had displayed a sign advertising the sale of real estate in July and August of 1983. More received permission for a limited remand to the trial court to supplement the motion. The district court heard arguments in September and denied the motion in a ruling in November 1984. The trial court determined that the existence of the sign, while marginally material since it went to More's alibi, would have had very little chance of changing the verdict considering all of the other evidence against More. More appealed.

B. Direct Appeal and Postconviction Proceedings.

1. *Direct appeal.* More asserted that the trial court erred in admitting the testimony of the nurse and the psychiatrist, violating doctor-patient privilege. *State v. More*, 382 N.W.2d 718, 720 (Iowa Ct. App. 1985). More also argued that the trial court abused its discretion when it denied his motion for a new trial based on newly discovered evidence related to the alleged real estate sign in Illinois. *Id.* Finally, More argued that he received ineffective assistance of counsel. *Id.*

The court of appeals found the testimony from the health care professionals violated the doctor-patient privilege in Iowa Code section 622.10 (1983). *Id.* at 722-23. The court found that although More

remained silent throughout the examination, the physician's knowledge and information gained through his examination and observation of More was information necessary and proper to treat him. *Id.* at 721. Further, More was not admitted to the psychiatric ward for the purpose of establishing a diminished capacity defense, but because medical staff believed that he posed a danger to himself. *Id.* at 722. The court found, therefore, that the sole purpose of the court order admitting More to the psychiatric ward was for diagnosis and treatment. *Id.* As a result, it ruled that the testimony of the doctors and the nurse should not have been admitted. *Id.*

Nevertheless, the court found that the admission was not so prejudicial as to amount to reversible error. *Id.* at 723. Among other evidence supporting the guilty verdict, the court cited the presence of More's fingerprints on the outside of the car in which the victim was found, a bullet found on More that matched the bullet used to kill the victim, the testimony of Elmore that he heard "two booms" and saw a man he identified as More at trial limping along and dousing the auto with something from a white container, the defendant's actions at the time of death, including his strange interaction with the victim's children, and his cross-country travels leading to his eventual arrest in Montana. *Id.* All this evidence, according to the court of appeals, amounted to "overwhelming evidence of the defendant's guilt." *Id.* As a result, the court held that the error of the admission of privileged material was harmless. *Id.*

More also argued that the trial court erred in failing to grant a new trial based on newly discovered evidence. *Id.* At trial, More had claimed he drove to Peoria after helping Townsend load groceries to track down a phone number advertising real estate for sale. Two officers testified they

drove to Peoria and did not see such a sign. *Id.* The newly discovered evidence was information received by counsel that a sign advertising real estate did in fact exist. *Id.* On the motion for a new trial based on newly discovered evidence, the court of appeals determined that the existence of the sign made little difference to More's alibi and the refusal of the district court to grant a new trial was not an abuse of discretion. *Id.* at 723–24. The court further reserved any claims of ineffective assistance of counsel for postconviction-relief proceedings. *Id.* at 724.

2. *First postconviction-relief action.* More filed his first petition for postconviction relief in 1996. He alleged that he was entitled to a new trial based on newly discovered evidence related to witness Jeffrey Elmore. More claimed that Elmore had recanted his testimony. Further, More claimed that the State suppressed information regarding a reward granted to Elmore in exchange for his testimony.

After a hearing, the district court denied More relief. The district court found Elmore's recantation "completely incredible." The district court noted that Elmore over the years had accumulated "three, four, or five burglaries, and two or three felony convictions." The district court further noted that More had interactions with Elmore at the infirmary at Fort Madison that were "an implicit threat." Additionally, the district court noted that Elmore's court testimony was completely consistent with his audio interview recorded just a few days after the murder. Finally, the district court found that Elmore's testimony before the postconviction court was internally inconsistent and that his testimony had been "completely impeached."

On the question of whether the State suppressed evidence related to an offer of a reward, the district court concluded that Elmore was aware of the prospect of a reward at the time of his testimony and that

he subsequently received the sum of \$350. Nonetheless, the district court did not find that the weight of this impeachment evidence would be very strong. In addition, the district court noted there was other substantial evidence supporting the verdict.

Based on the evidence presented to the district court, the court of appeals held that the State violated *Brady*² by withholding the potentially exculpatory evidence that the State had suggested Elmore might receive a reward in connection with his testimony. *More v. State*, No. 9-081/98-74, slip op. at 2 (Iowa Ct. App. Apr. 30, 1999). The court concluded, however, that More could not show that but for the *Brady* violation there was a substantial probability the result would have changed. *Id.* at 7.

In denying relief, the court cited a host of evidence, including the nature of the relationship between More and Townsend, More's behavior on the night of the murder, the discovery of the cartridge in his pocket, his fingerprints on the outside of the car, his admission of meeting the victim shortly before her death, and his interest in an insurance policy. *Id.* at 6. In addition, the court noted, "Using a neutron activation analysis, the bullet was found to have been manufactured and packaged in the same box and on the same day as the bullets found in the victim's body and in her car." *Id.* In light of the evidence, the court held that the *Brady* error did not pose a substantial probability that More would have been found not guilty had the information been available to the jury. *Id.* at 7.

With respect to the recantation issue, the court of appeals noted that the district court found Elmore's recantation "completely incredible."

²*Brady v. Maryland*, 373 U.S. 83, 87, 83 S. Ct. 1194, 1196-97, 10 L. Ed. 2d 215, 218 (1963) (holding that prosecution's suppression of evidence favorable to the accused violates due process where the evidence is material either to guilt or punishment).

Id. The court stated that recantation is generally looked at with suspicion. *Id.* at 8; see *State v. Folck*, 325 N.W.2d 368, 377 (Iowa 1982). Further, the court relied on the district court's finding on the recantation issue. *More*, No. 9-081/98-74, slip op. at 8; see *State v. Compiano*, 261 Iowa 509, 516, 154 N.W.2d 845, 849 (Iowa 1967).

3. *Second postconviction-relief action.* In 2007, More filed this current, second postconviction-relief action. In his application, More described Agent Asbury's CBLA testimony and stated that CBLA testimony of the kind given by Agent Asbury is now known to be false. Compositionally indistinguishable bullets, More continued, does not mean that the bullets came from the same source or were made on the same day. Further, More said, the FBI did not have data to support the likelihood of two matching bullets coming from the same source. More alleged that these facts support several grounds for relief: that the State has constructive knowledge of the FBI's knowledge, and so it knowingly used perjured testimony in violation of his due process; that the State violated his due process rights by withholding exculpatory evidence; and finally that the change in the scientific status of CBLA is newly discovered evidence which could not have been discovered at the time of his trial.

More's file languished until 2011. At that time, More obtained pro bono counsel who filed a motion for summary judgment. More presented two issues in his motion: (1) whether More was entitled to a new trial based upon the introduction of evidence that appeared to link More to the offense charged and is now known to be false or mistaken and unsupportable by science, and (2) whether More was entitled to a new trial because the state's evidence was "so arbitrary that the adversary system was not competent to recognize and take account of its

shortcomings that its admission violated the Due Process clauses of the United States and Iowa constitutions.”

In his summary judgment motion, More cited extensively from the transcript of his original trial. The transcript citations appear designed to show that without the CBLA testimony, the question of More’s guilt would be in doubt. However, the motion contained only a brief discussion of the scientific developments with respect to CBLA. More cited—but did not offer into the record—an FBI press release dated September 1, 2005, which purportedly stated that “neither scientists nor bullet manufacturers are able to definitively attest to the significance of an association made between bullets in the course of a bullet lead examination.”

The only exhibit related to scientific developments provided to the district court in support of the motion for summary judgment was a letter from the FBI to the Scott County Attorney dated April 20, 2009. The FBI letter stated that the FBI had conducted a review of the compositional analysis of bullet lead in the transcript of More’s trial. According to the letter, the goal of the review was to determine if there was a suggestion by an FBI witness that a bullet fragment or shot pellet was linked to a single box of ammunition without clarification that there would be a large number of other bullets or boxes of ammunition that could also match those fragments or shot pellets.

The letter directly addressed the scientific basis for testimony offered by FBI witnesses in More’s case. According to the letter, “Science does not support the statement or inference that bullets, shot pellets, or bullet fragments can be linked to a particular box of bullets.” In addition, the FBI letter emphasized the misleading character of even minimal CBLA testimony. According to the letter, even if an expert

witness did not testify that the bullets came from the same box, “any testimony stating bullets came from the same source of lead is potentially misleading without additional information regarding approximate numbers of other ‘analytically indistinguishable’ bullets that also originated from the same source.”

Further, the letter noted that FBI testimony often exaggerated the importance of geographic sales of bullets. According to the letter, “[T]estimony regarding the geographical distribution of analytically indistinguishable bullets exceeds the data currently available.” Finally, the letter drew some conclusions after examining the record in More’s case:

After reviewing the testimony of the FBI’s examiner, it is the opinion of the Federal Bureau of Investigation Laboratory that the examiner did state or implied that the evidentiary specimen(s) could be associated to a single box of ammunition. This type of testimony exceeds the limits of the science and cannot be supported by the FBI.

Aside from the 2009 FBI letter, More offered no expert affidavit or additional evidence in support of his petition.

The State resisted More’s motion for summary judgment. The State argued that there was a genuine issue of material fact as to whether there was newly discovered evidence on CBLA and, if there were, whether there was nevertheless ample evidence against More to support the jury’s verdict.

The postconviction-relief court denied summary judgment, finding issues of material fact. In 2014, More requested that a judge be assigned to try the case. The parties then agreed to trial on the record. The postconviction-relief court ruled against More, characterizing CBLA as “inadvertently inaccurate” and holding its inaccuracy did not rise to the

level sufficient to deny More a fair trial in light of the totality of the evidence against him.

More appealed. The court of appeals affirmed in September 2015. The court stated there was sufficient evidence that a reasonable juror could have found that More murdered Townsend beyond a reasonable doubt. The court observed that the

[e]xclusion of Agent Asbury’s opinion, along with exclusion of the testimony of the doctors and nurse, and the addition of further impeachment of Elmore’s testimony concerning the fact he was receiving a \$300 reward, does not paint the case in such a different light that our confidence in the verdict is undermined.

We granted further review.

II. Standard of Review.

Applications for postconviction relief (PCR) are normally reviewed for corrections of errors at law unless they raise constitutional issues. *Perez v. State*, 816 N.W.2d 354, 356 (Iowa 2012); *Daughenbaugh v. State*, 805 N.W.2d 591, 593 (Iowa 2011). A postconviction action based on newly discovered evidence is reviewed for corrections of errors at law. *See Webb v. State*, 555 N.W.2d 824, 825 (Iowa 1996) (reviewing postconviction actions for corrections of errors at law when they are raised on statutory but not constitutional grounds); *see also, e.g., James v. State*, No. 08–0021, 2009 WL 1492701 at *1 (Iowa Ct. App. May 29, 2009); *Neill v. State*, No. 04–0492, 2004 WL 2677457, at *1 (Iowa Ct. App. Nov. 24, 2004). A postconviction action based on a due process violation is reviewed de novo “in light of the totality of the circumstances and the record upon which the postconviction court’s ruling[] was made.” *Goosman v. State*, 764 N.W.2d 539, 541 (Iowa 2009) (quoting *Giles v. State*, 511 N.W.2d 622, 627 (Iowa 1994)); *accord Perez*, 816 N.W.2d at 356; *Harrington v. State*, 659 N.W.2d 509, 519 (Iowa 2003).

III. New Trial Issue Based upon State of CBLA.

A. Introduction. More raises two claims in this appeal. First, he asserts that the postconviction-relief court erred when it failed to grant him a new trial based upon newly discovered evidence. Second, he asserts that the introduction of the flawed CBLA evidence at trial deprived him of due process of law under the United States and Iowa Constitutions. We first consider the newly discovered evidence claim.

B. Applicable Legal Standards.

1. *Newly discovered evidence.* The Iowa Code provides that a person may apply for postconviction relief if “[t]here exists evidence of material facts, not previously presented and heard, that requires vacation of the conviction or sentence in the interest of justice,” among other grounds. Iowa Code § 822.2(d) (2007). In order to prevail in a PCR action because of newly discovered evidence, the defendant must show

(1) that the evidence was discovered after the verdict; (2) that it could not have been discovered earlier in the exercise of due diligence; (3) that the evidence is material to the issues in the case and not merely cumulative or impeaching; and (4) that the evidence probably would have changed the result of the trial.

Jones v. State, 479 N.W.2d 265, 274 (Iowa 1991); *accord Harrington*, 659 N.W.2d at 516; *State v. Smith*, 573 N.W.2d 14, 21 (Iowa 1997). The standard for whether the evidence probably would have changed the result of the trial is a high one because of the interest in bringing finality to criminal litigation. *See Jones v. Scurr*, 316 N.W.2d 905, 910 (Iowa 1982) (explaining that courts look with disfavor on motions for new trials based on newly discovered evidence because they “upset an end to litigation”); *State v. Jackson*, 223 N.W.2d 229, 233 (Iowa 1974) (holding motions for a new trial based on newly discovered evidence “are not

avored in the law and should be closely scrutinized and sparingly granted”).

2. *Due process.* The Fifth Amendment to the United States Constitution states that no person shall “be deprived of life, liberty, or property, without due process of law,” and the Fourteenth Amendment also states that no state shall “deprive any person of life, liberty, or property, without due process of law.” Article I, section 9 of the Iowa Constitution states that “no person shall be deprived of life, liberty, or property, without due process of law.” “Due process requires fundamental fairness in a judicial proceeding,” so a trial that is fundamentally unfair violates the guarantees of due process in the United States and Iowa Constitutions. *State v. Becker*, 818 N.W.2d 135, 148 (Iowa 2012) (quoting *In re Det. of Morrow*, 616 N.W.2d 544, 549 (Iowa 2000)); see also *United States v. Mendoza-Lopez*, 481 U.S. 828, 839–40, 107 S. Ct. 2148, 2156, 95 L. Ed. 2d 772, 783 (1987).³

Due process requires that evidence be reliable, and some evidence may be so unreliable that its admission violates due process. *Foster v. California*, 394 U.S. 440, 449, 89 S. Ct. 1127, 1131, 22 L. Ed. 2d 402, 410 (1969); see also *Manson v. Brathwaite*, 432 U.S. 98, 117, 97 S. Ct. 2243, 2254, 53 L. Ed. 2d 140, 155 (1977) (suggesting that for evidence to be excluded as unreliable, it must reach a certain level of unreliability); Keith A. Findley, *Judicial Gatekeeping of Suspect Evidence: Due Process and Evidentiary Rules in the Age of Innocence*, 47 Ga. L. Rev. 723, 725

³While More cites the due process clauses of both the United States and Iowa Constitutions, he does not suggest that a different standard should be applied under the Iowa Constitution. As a result, for the purposes of this case, we apply the federal due process standard but reserve the right to apply that general standard differently under the Iowa Constitution. See, e.g., *State v. Cox*, 781 N.W.2d 757, 768–69 (Iowa 2010) (departing from federal precedent and finding a due process violation under article I, section 9 of the Iowa Constitution by rejecting a federal balancing test for admission of prior bad acts evidence).

(2013) (“[T]he various rights protected by the Fifth and Sixth Amendments in particular can be understood as largely focused on establishing mechanisms for ensuring reliability of the trial evidence and the trial process.”). For the admission of evidence to violate due process, it is not sufficient that the evidence is “merely untrustworthy,” but the evidence must be “so inherently unreliable that to even allow a jury to consider it is a denial of due process.” *State v. Bruns*, 304 N.W.2d 217, 219 (Iowa 1981) (citing *Manson*, 432 U.S. at 113, 97 S. Ct. at 2252; 53 L. Ed. 2d at 153); accord *State v. Walton*, 424 N.W.2d 444, 446–47 (Iowa 1988). In other words, to find that the introduction of evidence violates due process, the evidence must be so inherently unreliable that it renders the trial fundamentally unfair. See *Romano v. Oklahoma*, 512 U.S. 1, 12, 114 S. Ct. 2004, 2012, 129 L. Ed. 2d 1, 13 (1994); accord *Dowling v. United States*, 493 U.S. 342, 353, 110 S. Ct. 668, 674, 107 L. Ed. 2d 708, 720 (1990); *Becker*, 818 N.W.2d at 148.

C. Caselaw Considering the Discrediting of CBLA as Grounds for New Trial. We have yet to consider a postconviction-relief application relying on the discovery of new evidence on CBLA. However, there have been numerous cases in other jurisdictions on the issue. See Fern L. Kletter, Annotation, *Use and Effect of Comparative Bullet Lead Analysis (CBLA) in Criminal Cases*, 92 A.L.R.6th 549, § 1 (2014). A few cases have provided a measure of relief, but most have denied relief, many on the ground that the outcome of the trial would not be changed by the new evidence.

A leading CBLA case where the defendant was granted a new trial based on newly discovered evidence is *State v. Behn*, 868 A.2d 329 (N.J. Super. Ct. App. Div. 2005). In *Behn*, the defendant was convicted of

murder and armed robbery in 1997. *Id.* at 332. The victim, a coin dealer, was shot four times at his place of business in the evening. *Id.*

At Behn's 1997 trial, the state presented the testimony of FBI expert Charles Peters. *Id.* at 334. Peters testified that lead fragments recovered from the decedent's body and from the defendant's bullets were analytically indistinguishable, came from the same source of lead, came from the same box or boxes, and were packaged on the same date by the manufacturer. *Id.* at 335. On direct appeal, Behn's conviction was affirmed. *Id.* at 332. The appellate court stated that "the evidence, though circumstantial and subject to differing views by reasonable jurors, was sufficient to prove guilt beyond a reasonable doubt if the jury drew all the available inferences in favor of the prosecution." *Id.*

In 2002, Behn filed a petition for postconviction relief based on the developments in CBLA science. *Id.* at 336. In his verified petition, Behn summarized the findings of Erik Randich, a metallurgist at the Lawrence Livermore National Laboratories who concluded that Peters's testimony that bullets from each lot of lead were homogenous was false and that his testimony that bullets possessed by Behn and those found in the deceased came from the same source was also false. *Id.* at 336. Behn supported his allegations with a letter from Randich which described his work. *Id.* at 337. According to the letter, Randich was contacted by a retired chief metallurgist for the FBI, William Tobin, because of concerns Tobin had about the "misinterpretation and/or misuse of the metallurgic data obtained in the bullet lead analysis procedure." *Id.* at 337. Randich described his efforts from December 1999 through March 2001 to investigate the science. *Id.* at 338. Randich contacted the originator of CBLA, Vincent Guinn, to talk about the problems with the assumptions of CBLA that his investigation revealed. *Id.* Guinn

admitted that “no one to his knowledge had ever checked with the lead smelters to see if the ‘sources’ were unique and homogenous” and that “the FBI [analysts] who use the method just assumed that there could never be non-unique melts of lead alloy.” *Id.* Randich concluded that his data showed that this was not a valid assumption. *Id.* He further concluded that the information he developed on CBLA was not generally available in the forensic community until recently. *Id.*

Behn also submitted to the postconviction-relief court an affidavit from his sister, Jacqueline Behn, a sociology and criminology professor who assisted Behn’s attorneys in his defense. *Id.* at 342. She stated that despite her best efforts, she was not able to find an expert witness with the capacity to testify on the issue of CBLA prior to Behn’s trial notwithstanding spending between 150 and 200 hours researching the issue. *Id.*

The postconviction-relief court denied relief. *Id.* at 332. According to the court, the record established a “newly assembled argument as opposed to newly discovered evidence.” *Id.* at 339. Further, the postconviction court determined that a retrial would not probably result in a different outcome. *Id.*

The day the postconviction-relief court denied relief, Behn filed an affidavit by William Tobin, the retired FBI chief metallurgist. *Id.* Tobin stated he retired in 1998, one year after Behn’s criminal trial, and began collaborative research efforts on CBLA. *Id.* at 340. According to Tobin, in 1997, independent practitioners of CBLA outside the FBI laboratory were “nonexistent.” *Id.* Tobin stated that it took him approximately three years, even with collaboration, to assess the validity of CBLA inferences. *Id.* at 340–41. Tobin stated, “It was not known until late 2002 that there existed no valid and relevant database of bullet

compositions, nor any meaningful or comprehensive studies, to permit interpretation of the forensic significance of an alleged ‘match’ of bullet compositions.” *Id.* at 341. The postconviction court was unmoved by the Tobin affidavit and denied reconsideration of its ruling adverse to Behn. *Id.* at 342.

The appellate panel in *Behn* reversed the district court. The appellate court concluded,

There is no doubt that the information at issue, the results of the studies by Randich, Tobin and others, was newly discovered since it was not developed until after defendant’s trial. Clearly, such new scientific evidence may constitute newly discovered evidence. . . .

. . . Whatever any other experts, including those mentioned [in other CBLA cases], might have been able to say on the subject, none could have refuted Peters’ testimony in the way that Randich and his colleagues could, since the basis for the impeachment did not exist in April 1995 when defendant’s trial was conducted.

Id. at 343 (footnote omitted).

In considering whether the new evidence was merely cumulative or impeaching, the court held that it was clearly not cumulative “since no comparable evidence was offered at trial.” *Id.* at 344. The court determined that the standard for whether evidence is merely cumulative or impeaching is the *Brady* standard: whether the evidence “impeaches a witness where the issue of the witness’ reliability and credibility is crucial.” *Id.* at 344–45. Under this standard, the new CBLA evidence was not merely cumulative or impeaching. *Id.* at 345.

Finally, the court concluded that because this newly discovered evidence “would have effectively neutralized the testimony” of the FBI agent, in the specific context of Behn’s trial and given the highly circumstantial nature of the other evidence, there was a probability that

this new evidence could have changed the jury's verdict. *Id.* The court noted as important the fact that the prosecutor stressed the FBI agent's testimony in his summation and held that "[h]aving offered these proofs and argued their significance, the State should not be permitted to now 'walk away' from its evidence and demean its importance." *Id.* at 346.⁴

The Massachusetts Supreme Court came to a different result in a case involving a claim of newly discovered CBLA evidence, *Commonwealth v. Lykus*, 885 N.E.2d 769 (Mass. 2008). In a 1973 murder trial, an FBI expert testified that the bullets recovered from the victim and those from Lykus were similar in chemical composition and "could have originated from the same source of lead." *Id.* at 776. The FBI expert stated, although he could not say for certain, a remote possibility existed that the bullets came from different boxes of ammunition. *Id.* The FBI expert on cross-examination did not say that the bullets definitely came from the same batch and stated that up to 100,000 bullets could have been manufactured from a single batch and have the same chemical composition. *Id.*

Lykus sought a new trial based on newly discovered evidence contained in a 2004 report by the National Research Council (NRC). *Id.* at 779–80; see National Research Council of the National Academies, *Forensic Analysis: Weighing Bullet Lead Evidence* (2004) [hereinafter NRC Report]. That report indicated that there could be as many as thirty-five million bullets manufactured from the same batch rather than

⁴After the verdict was vacated, a new trial occurred where Behn was again convicted. *State v. Behn*, No. A-5554-05T1, 2009 WL 160918, at *1 (N.J. Super. Ct. App. Div. Jan. 26, 2009) (per curiam). Behn again applied for PCR which was denied. *State v. Behn*, No. A-1560-12T3, 2014 WL 7883579, at *1 (N.J. Super. Ct. App. Div. Feb. 18, 2015) (per curiam).

the 100,000 figure offered by the FBI expert. *Id.* at 779, 784.⁵ The Massachusetts Supreme Court noted, however, that the FBI witness was “impeached sufficiently” at trial on the issue. *Id.* at 784. Further, the court observed that the prosecutor did not give the FBI expert’s testimony “any special weight” in his closing argument. *Id.* Finally, the defendant had admitted that he was present when the victim was killed in the back seat of his car by his gun and his bullets. *Id.*

The Pennsylvania Supreme Court also denied relief to a defendant seeking a new trial based on newly discovered CBLA evidence in *Commonwealth v. Fisher*, 870 A.2d 864 (Pa. 2005). Fisher was convicted of murder in connection with the death of his girlfriend. *Id.* at 865–66. At the 1988 trial, an FBI expert testified that bullets from the victim and those associated with Fisher were analytically indistinguishable and that such bullets typically come from the same ammunition box. *Id.* at 866–67. The FBI agent, however, also said that the bullets could have come from a different box but that such a box most likely had to have been manufactured and packaged on the same date. *Id.* at 867. Defense counsel cross-examined the expert, suggesting that other bullets sold by the same manufacturer in the area had the same composition so that anyone who purchased those bullets could be equally associated with the bullets used to kill the victim. *Id.*

In 2004, Fisher filed a claim for postconviction relief. *Id.* at 868. In that action, Fisher claimed that the soon-to-be-released NRC report criticizing the FBI’s use of CBLA amounted to newly discovered evidence.

⁵The *Lykus* court later asserted that the report indicated nine billion bullets could be made from the same batch of lead. *Lykus*, 885 N.E.2d at 784. However, the report as quoted said that nine billion bullets are made each year. *Id.* at 779.

Id. Fisher also submitted an expert opinion from Tobin, who asserted that the CBLA evidence in Fisher’s case was not scientifically valid. *Id.*

The Pennsylvania Supreme Court rejected the claim. *Id.* at 872. In addition to a dispositive procedural error, the court noted that Fisher’s trial lawyer effectively cross-examined the agent and that even in light of CBLA criticism, a jury could reasonably infer that the bullets came from the same source when they are “analytically indistinguishable.” *Id.* at 866, 871–72. The court also suggested overwhelming evidence supporting the conviction. *Id.* at 872.

In considering questions surrounding the validity of CBLA evidence, it is necessary to recognize the importance of the procedural posture of the case. Specifically, there is a significant difference between considering the question of whether CBLA is admissible at trial on direct appeal and the question of whether the admission of faulty or misleading CBLA evidence is the basis for vacation of a conviction based on newly discovered evidence. Two cases from Kentucky illustrate the distinction.

In *Ragland v. Commonwealth*, a student at the University of Kentucky was killed by gunfire in 1994 while he celebrated his twenty-first birthday on the porch of a residence. 191 S.W.3d 569, 573 (Ky. 2006). In 2000, Ragland’s girlfriend told police he had confessed the crime to her. *Id.* Ragland was ultimately charged with the murder. *Id.* at 572. The case was brought to trial in March 2002. *Id.* at 578.

In a pretrial *Daubert* hearing,⁶ Ragland sought to suppress the testimony of an expert witness for the prosecution, Kathleen Lundy, an FBI metallurgist. *Id.* at 574. Lundy claimed that the bullet fragment

⁶*Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 589, 113 S. Ct. 2786, 2795, 125 L. Ed. 2d 469, 480 (1993) (holding trial courts must act as a gatekeeper in the admission of “purportedly scientific evidence” by ensuring “that any and all scientific testimony or evidence admitted is not only relevant, but reliable”).

removed from the victim's body was analytically indistinguishable from one of the bullets found in a rifle belonging to Ragland and nine of seventeen bullets in an ammunition box found at his mother's residence. *Id.*

Ragland supported his position with Tobin's opinion. *Id.* at 577. Tobin stated he disagreed with Lundy's opinion that a finding that two bullets were analytically indistinguishable was consistent with their having come from the same source. *Id.* The trial court denied Ragland's motion to exclude at the *Daubert* hearing. *Id.* Ragland was subsequently convicted. *Id.* at 572. In his direct appeal, Ragland, among other things, challenged the ruling of the district court failing to exclude Lundy's testimony at his trial. *Id.* at 572–73.

The Kentucky Supreme Court agreed with Ragland on the *Daubert* issue. *Id.* at 580. In addition to citing Tobin's opinion, the court reviewed the literature relating to CBLA. *Id.* at 578–80. It cited the academic work of Tobin and Randich. *Id.* at 578. Further, the court cited the 2004 NRC Report. *Id.* at 578–79. The NRC study was highly critical of the FBI's CBLA analysis. *Id.* Among other things, the NRC study concluded,

The available data do not support any statement that a crime bullet came from, or is likely to have come from, a particular box of ammunition, and references to "boxes" of ammunition in any form are seriously misleading Testimony that the crime bullet came from the defendant's box or from a box manufactured at the same time, is also objectionable because it may be understood as implying a substantial probability that the bullet came from the defendant's box.

Id. at 579 (quoting NRC Report at 113). The court also cited the September 1, 2005 press release that stated that the FBI would no longer be conducting CBLA testing.⁷ *Id.* at 579–80.

The Kentucky Supreme Court determined the trial court erred in failing to suppress Lundy’s testimony. *Id.* at 580. The court stressed that the trial court failed to properly consider the scientific conclusions drawn by Lundy in her analysis. *Id.* The court determined that it was not necessary to remand for a new *Daubert* hearing, however, because the FBI itself now considered CBLA testimony to be insufficiently reliable and it therefore would have been an abuse of discretion for the trial court to come to any conclusion other than to suppress the evidence.⁸ *Id.*

Although the Kentucky Supreme Court found CBLA evidence in *Ragland* inadmissible under *Daubert* on direct appeal and ordered a new trial, it came to a different conclusion in a CBLA case where the defendant sought a new trial based upon newly discovered CBLA evidence in a collateral attack on a previously affirmed conviction. *St. Clair v. Commonwealth*, 451 S.W.3d 597, 609 (Ky. 2014). In *St. Clair*,

⁷It is unclear from the opinion in *Ragland* whether the literature surrounding CBLA was offered into the record.

⁸A different result occurred in the context of a direct appeal in *State v. Noel*, 723 A.2d 602 (N.J. 1999). In that case, the FBI expert testified that “bullets that come from the same box have the same composition of lead and bullets that come from different boxes . . . will have different compositions.” *Id.* at 604. The New Jersey trial court admitted the testimony over the defendant’s objection. *Id.* On appeal, the appellate division reversed, concluding that evidence was inadmissible absent foundational evidence regarding the statistical probability of two sets of bullets having the same composition. *Id.* The New Jersey Supreme Court reversed the intermediate appellate decision and reinstated the conviction, holding the testimony “merely showed that some of the bullets from the crime scene, defendant’s bag, and the victim’s body contained the same trace elements” and “constituted a link in the chain of evidence connecting defendant to the murder.” *Id.* at 607. A dissent suggested, however, that the testimony was significantly misleading and required a new trial. *Id.* at 607–10 (O’Hern, J., dissenting). Notably, *Noel* was decided prior to the NRC report in 2004 and the FBI’s admission in 2009 that certain conclusions of its experts were no longer supportable.

the defendant was convicted of murder in 1998. *Id.* In 2010, he moved for a new trial on the ground of newly discovered CBLA evidence. *Id.* at 610. At his criminal trial in 1998, an FBI expert had testified that bullets from the victim and those found in the possession of St. Clair were “very close in composition” and that “[i]t would make sense that all of these [compared bullets] are from the same box.” *Id.* at 616. Further, the FBI expert stated that “if you’re looking at any two pieces of lead and you find that they have the same composition, that is [what] you would expect if they were in the same box” or at least packaged “on or about the same date.” *Id.* On cross-examination, the FBI expert admitted that he could not rule out the possibility that the bullets were from different boxes. *Id.* As in this case, St. Clair received a letter in 2009 from the FBI stating that the testimony from the FBI expert was inappropriate because “the examiner failed to provide sufficient information to the jury to allow them to understand the number of bullets produced from a single melt of lead.” *Id.* at 615.

The Kentucky Supreme Court denied relief. *Id.* at 618. The court noted that “[t]here is no question that the CBLA evidence would not be permitted today.” *Id.* at 616. But in order to grant a new trial based upon newly discovered evidence, the new evidence must be of such weight that the results of the trial probably would have been different. *Id.* at 617. The court proceeded to canvass the record in the case and concluded that because of the other evidence presented against St. Clair, including witness identifications, a jailhouse informant, ballistics evidence, and St. Clair’s fingerprints on items at the scene of the crime, it was not probable that the results of the trial would have changed had the CBLA evidence been excluded. *Id.* at 617–18.

As in *St. Clair*, our review of the caselaw indicates that CBLA cases involving collateral attacks on final convictions are often decided based upon whether the defendant has demonstrated that the outcome of the trial would have been different had the CBLA evidence been excluded. See, e.g., *Bowling v. Commonwealth*, No. 2006-SC-000034-MR, 2008 WL 4291670, at *3 (Ky. Sept. 18, 2008) (upholding conviction notwithstanding flaws in CBLA testimony based on strength of other evidence); *Slaughter v. State*, 108 P.3d 1052, 1055 (Okla. Crim. App. 2005) (holding in the alternative that even if CBLA evidence offered at trial was flawed, bullets found at the crime scene and in possession of defendant were particularly distinctive bullets that presented “strong evidence of guilt”); *In re Pers. Restraint of Trapp*, No. 65393–8–I, 2011 WL 5966266, at *1, *3, *6 (Wash. Ct. App. Nov. 28, 2011) (per curiam) (holding that although defendant received 2009 FBI letter stating evidence in case was “misleading” and “not supported by science,” defendant was not entitled to a new trial based on newly discovered evidence where defendant failed to show that absence of recanted testimony would probably have changed the result at trial, “an exacting standard”).

There is one last case that, though unreported, illustrates the nature of CBLA challenges under facts that at least approach those in this case and demonstrates the important distinction between the admissibility of evidence and whether the admission of false or misleading evidence forms the basis for a successful motion for a new trial. An unreported case from another jurisdiction falls far short, of course, of binding authority, but the discussion in such a case can be a teaching tool to inform the court’s resolution of contested issues.

In *Commonwealth v. Daye*, three defendants moved for a new trial on grounds of newly discovered CBLA evidence. No. 11238–11246, 2005 WL 1971027, at *1 (Mass. Super. Ct. Aug. 3, 2005). At their trial in 1987, an FBI agent stated that bullets from the victim and bullets found at the home of one of the defendant’s came “from the same box of ammunition, or from another box of ammunition that was produced at the same place on or about the same date.” *Id.*

The defense cross-examined the FBI expert but also offered the testimony of Stephen Morris, the same expert employed by More in his original trial in 1984. *Id.* Morris relied on a report known as the Lukens Report that opined there was not a sufficient scientific basis to support the FBI’s bullet-matching science. *Id.* He also attacked the underlying CBLA technique, stating that there were not sufficient points of comparison to justify a common origin of the bullets. *Id.* at *4. Morris testified that there could be too many similar bullets, or false positives, to link any specific bullet to a specific manufacturer or date of manufacture. *Id.*

In the motion for a new trial, the defendants relied on a draft version of the NRC report as newly discovered evidence. *Id.* at *2. The defendants also offered the expert testimony of Tobin. *Id.* at *4. Tobin testified he agreed with all of Morris’s testimony at trial. *Id.* In addition, Tobin characterized the CBLA as having no value and being nothing more than “junk science.” *Id.*

The district court rejected the motion for a new trial. *Id.* at *7. The district court noted that much of the attack on CBLA was developed by Morris at the original trial. *Id.* at *6. Further, the district court noted that the NRC draft report did not throw out CBLA in its entirety, but only certain conclusions—namely, that CBLA can support a finding that

bullets from the crime scene came from the same melt as bullets in the possession of the defendant. *Id.* at *5. The trial court cited the following passage in the NRC report:

A conclusion that two bullets came from the same melt [batch of lead] does not justify an expert in further testifying that this fact increases the odds that the crime bullet came from the defendant. The large number of bullets from a single melt and the absence of information on the geographic distribution of such bullets precludes the testimony *as a matter of expertise*. Such an inference is a matter for the jury.

Id. at *3 (quoting NRC Report, at 102).

Following the NRC report, the court stated that the FBI agent could “not now testify, given the state of the science as explained in the NRC report, that the bullet in the [defendant’s mother’s residence] came from the same box or batch as the bullet that was found in [the victim].” *Id.* The trial court further observed, however, that under the NRC report, the prosecutor could make such an argument to the jury. *Id.* The trial court rejected testimony from Tobin, however, that CBLA in its entirety was “junk science.” *Id.* at *4–5.

While the district court recognized that the NRC report buttressed Morris’s criticism of the FBI approach, it did not “discredit [CBLA] as a scientific tool.” *Id.* at *5. The district court found that the NRC report tracked Morris’s criticism concerning the possibility of false positives, which would preclude an expert from linking a bullet to the same box or batch. *Id.* at *6. Thus, according to the district court, the evidence was not only available at the time of trial, but it was actually utilized. *Id.*

The district court recognized that the NRC report, had it been available at the time of the defendant’s trial, would certainly have helped the defense. *Id.* But according to the district court, this did not meet the requirements for granting a motion for a new trial. *Id.* Citing prior

Massachusetts precedent, the district court noted that science is constantly evolving and that mere advancement in learning that provides more support to an expert that was or could have been presented at trial is insufficient. *Id.* at *7 (citing *Commonwealth v. LaFave*, 714 N.E.2d 805, 813 (Mass. 1999)).

D. Caselaw Considering Admission of Discredited CBLA Testimony as Violation of Due Process. There have been a handful of cases considering whether the introduction of CBLA evidence violates due process of law under the United States Constitution. In *United States v. Berry*, the United States Ninth Circuit Court of Appeals considered whether the introduction of CBLA evidence regarding buckshot in a pipe bomb violated due process. 624 F.3d 1031, 1039–42 (9th Cir. 2010).

The Ninth Circuit found no due process violation. *Id.* at 1042. Though it acknowledged that CBLA is flawed, the court said, “[W]e do not find it so arbitrary as to render [the defendant’s] trial ‘fundamentally unfair.’” *Id.* at 1040. Regarding the NRC report, the court found that the criticisms it contained could easily have been exposed through vigorous cross-examination of the State’s expert. *Id.* Moreover, the NRC report and other criticisms of CBLA do not establish that the technique is “almost entirely unreliable,” but rather that CBLA’s assumptions are not generally accepted by the scientific community and that there is a risk of false positives. *Id.* at 1041.

Additionally, the Ninth Circuit noted that even if CBLA were generally unreliable, in that particular case the expert focused her testimony on the specific lead manufacturing process of the buckshot maker and the shipping distribution of its buckshot. *Id.* at 1042. Moreover, she did not overstate her conclusions, testifying that the

buckshot from the bomb and in the possession of the defendant had identical chemical profiles but that she could not determine that they came from the same source. *Id.* at 1041–42. Therefore, the court concluded that the evidence was not fundamentally unreliable and that the adversary system was competent to determine the proper weight to give the evidence by uncovering, recognizing, and taking into account its shortcomings. *Id.* at 1042.

In *United States v. Chalan*, the Tenth Circuit Court of Appeals held that the defendant could not get a certificate of appealability on his CBLA due process claim because the merits of his claim were not subject to reasonable debate. 438 F. App'x 710, 712–13 (10th Cir. 2011). The court said “[t]he CBLA evidence presented at trial merely implied that some bullet fragments found at the crime scene likely came from the same box of bullets” but did not outright claim that they came from the same source. *Id.* at 713. Additionally, the court noted that this evidence, even if it was inaccurate, did not create actual prejudice sufficient to sustain a federal habeas claim. *Id.*

Finally, the Superior Court of Pennsylvania considered a due process challenge to a conviction based upon CBLA evidence in *Commonwealth v. Kretchmar*, 971 A.2d 1249 (Pa. Super. Ct. 2009). In that case, Kretchmar was convicted of first-degree murder after a jury trial in 1988. *Id.* at 1250. At his trial, an FBI expert testified that bullets extracted from the victim’s body matched in elemental composition those found in a half empty box discovered in an apartment. *Id.* at 1252. The court noted that the FBI expert did not testify that the bullet fragments were from the same box of ammunition and certainly left open the possibility of random matches. *Id.* at 1257. The court thus declined to find a due process violation. *Id.* at 1257–58.

E. Analysis of Newly Discovered Evidence.

1. *Discovery of new evidence after verdict.* It is certainly true that the 2009 FBI letter declaring that the type of testimony offered in More's case was not scientifically supportable—to the extent it suggested that the bullet in the cartridge in More's possession came from the same box of ammunition—is evidence that could not have been discovered earlier by due diligence of More's counsel. The evidence that the FBI no longer believed that the testimony offered by its CBLA experts—to the extent it suggested that CBLA demonstrated that the bullets came from a common ammunition box—simply did not exist at the time of More's 1984 trial, but was only available twenty-five years later.

Further, the contents of the letter are not merely cumulative or impeaching. It is true that, in More's case, he had expert testimony attacking the validity of CBLA science offered by the FBI expert witnesses. If it had been available at trial, the letter would not simply have reinforced the testimony of More's expert, but it would have either prevented the FBI expert from testifying at all or would have required that the testimony be significantly altered to avoid the implication of the likelihood of a match from the same box based solely on CBLA. If one applies the *Brady*-type test used in *Behn*, 868 A.2d at 344–45, to determine if the evidence is more than merely cumulative or impeaching—i.e., whether failure to turn over the letter, if in the hands of the prosecution at the time of trial, would amount to a *Brady* violation—the answer is clearly yes.

Yet the letter does not suggest that FBI experts may no longer credibly testify on CBLA. There is nothing in the letter that states that FBI witnesses may not testify in criminal trials that the metals in the bullets found at the crime scene have the same trace elements as the

bullets in the possession of the defendant. What such witnesses could not do, however, consistent with the available science, is (1) draw or imply the conclusion that the bullets must have come from the same box of ammunition based on CBLA analysis; (2) fail to present testimony about a very large number of potentially analytically indistinct bullets that could exist; or (3) offer testimony about the effect of geographic distribution of bullets based on knowledge available to the FBI at the time of the 2009 FBI letter.

Beyond the specific contents of the letter disowning interpretation of the significance of CBLA, More offered no other newly discovered evidence at his second postconviction-relief proceeding. Unlike in *Behn* and *Ragland*, More did not, for instance, submit the 2004 NRC report to the district court or the 2005 FBI press release announcing that it would no longer conduct CBLA analysis. Nor did More provide an affidavit or statement from any expert outlining how the science of CBLA had advanced since 1984.

The question of whether there is newly discovered “evidence,” and the question of due diligence seem to pose questions of adjudicative facts for which evidence must ordinarily be offered into the record. *See United States v. Boyd*, 289 F.3d 1254, 1259 (10th Cir. 2002) (finding it an error to take judicial notice of scientific fact where application of that fact to case was in dispute); *United States v. Bonds*, 12 F.3d 540, 551–52 (6th Cir. 1993) (striking an NRC report on DNA from appellate brief as it was not available to lower court).

On the other hand, there is authority for the proposition that the state of the art in science may be subject to judicial notice. *See People v. Luna*, 989 N.E.2d 655, 667 (Ill. App. Ct. 2013) (taking judicial notice of unequivocal and undisputed prior judicial decisions or technical writings

on the subject); *Johnson v. Commonwealth*, 12 S.W.3d 258, 263 (Ky. 1999) (taking judicial notice of overwhelming acceptance of a scientific principle); *Reed v. State*, 391 A.2d 364, 367 (Md. 1978) (finding the validity and reliability of a scientific technique may be so broadly and generally accepted in the scientific community that a trial court may take judicial notice of its reliability); *see also* Iowa R. Evid. 5.201(b). Where issues are subject to controversy, however, judicial notice is not appropriate. *See Rhoades v. State*, 848 N.W.2d 22, 31 (Iowa 2014). For the purpose of this appeal, however, we assume without deciding that the science reflected in the NRC report is properly before the court as in *Behn*.

Unlike in *Behn*, however, More did offer evidence at trial from his expert, Morris, that frontally attacked the validity of the CBLA science espoused by the FBI witnesses. Through Morris, More challenged the reliability of CBLA on the ground that the FBI's interpretations of the results were scientifically unsupportable because they did not take into account a sufficient number of variables. Morris, however, did not take issue with the underlying analysis of the bullets—namely, that they had similar trace metal characteristics.

It might be argued that the NRC report, unlike the 2009 FBI letter, is merely cumulative of the testimony offered by Morris. Science is constantly evolving. A new trial cannot automatically be triggered based upon the latest scientific report advancing the state of the art, for if it could, there would be no finality for any convictions based on scientific evidence.

Yet the NRC report is not just another article destined to be piled high on researchers' desks before being discarded in academic dustbins. The NRC is a blockbuster report on CBLA with new statistical data

previously unavailable to scientists. Among other things, the NRC report suggested that there could be *thirty-five million bullets* with the same CBLA characteristics, thus indicating a large potential risk of false positives. While each marginal advance in science cannot form the basis of a new trial, watershed developments are a different story.

In *Lykus*, the court concluded that the NRC report was not a basis for a new trial, in part because the FBI agent testified that there could be as many as 100,000 matching bullets. 885 N.E.2d at 776. The *Lykus* court found that the defendant did successfully impeach the FBI testimony, although the NRC report would indicate that there could be as many as thirty-five million similar bullets. *Id.* at 776, 779. Further, the *Lykus* court noted that the prosecutor did not suggest that the FBI agent's testimony should be given any weight in closing. *Id.* at 784.

Here, although Morris's testimony was useful, he did not offer testimony to the effect that there could be thousands or millions of matches. Further, the FBI agent was adamant on cross-examination that the FBI did not see matching bullets from different ammunition boxes bought at different places and times throughout the United States. Moreover, and perhaps most tellingly, the prosecutor did ask the jury to give the FBI agent's testimony special weight in his closing arguments, saying that the FBI had been doing CBLA for a long time and that the agent was confident and "[h]e says the bullets match."

Based on the above, we conclude, consistent with *Behn*, that there is newly discovered evidence that could not have been discovered through due diligence at the time of trial and that is not cumulative. We now proceed to the final question: whether More has shown a reasonable probability that the result would have been different.

2. *Would the verdict have been different?* We now turn to the question of whether the verdict would have been different had the newly discovered evidence been available to More. We note that this is not a harmless error standard, or even the kind of prejudice associated in federal courts with ineffective assistance of counsel. See *Strickland v. Washington*, 466 U.S. 668, 686, 104 S. Ct. 2052, 2064, 80 L. Ed. 2d 674, 692–93 (1984). Instead, the inquiry is whether, based upon all the evidence, the verdict probably would have been different in the case before us. *Jones*, 316 N.W.2d at 910; *State v. Hicks*, 277 N.W.2d 889, 896 (Iowa 1979). The question, of course, is case specific and fact intensive.

Based on our review of the entire record, we conclude that More has not met the high standard of showing that the verdict probably would have been different based on newly discovered CBLA evidence. The case against More, of course, was largely circumstantial. Yet, we simply cannot say that there probably would have been a different result if the new science discrediting the FBI's CBLA interpretation was available.

Among other things, the record shows the following facts which support More's guilt: he and Townsend had a relationship in 1976 that included discussions of marriage but ended when More left abruptly. The two rekindled their relationship in 1983. More lived about half-time at her residence in Bettendorf and was otherwise away, often in southern Illinois.

More and Townsend again discussed marriage in 1983. They purchased life insurance policies. More was a fifty percent beneficiary of a term policy on Townsend with a \$100,000 death benefit. Among other things, More had previously received insurance benefits from injuries

arising from a work accident, from a hunting accident, and from property loss. More owned many guns and had a high degree of interest in them. He frequently carried a handgun in a shoulder holster and displayed his guns to interested persons.

Shortly before the murder, More had financial troubles. He sold certificates of deposit to pay off some of his debt and borrowed money against his automobile. Townsend told a close friend that she had decided not to marry More, that their problems were “insurmountable,” and that she was going “to need some help telling him.” More met his ex-wife, Bernadette, in southern Illinois. While they had a contentious relationship in the past, Bernadette seemed to have a different attitude toward More.

More testified he was returning from Illinois when he saw Townsend immediately prior to her death. Shortly after she purchased groceries at 4:37 p.m., as shown on the receipt, More helped Townsend put the groceries into the back of the vehicle. Rather than follow her to the residence, More testified that he decided to drive back toward Peoria, Illinois, to look for the phone number written on a real estate sign he had seen. More’s fingerprints were found on the vehicle and on a pop can inside the vehicle after Townsend’s death.

The murder itself occurred in an auto dealer parking lot about ten minutes away from the grocery store. Jeffrey Elmore testified that he was in the dealership parking lot at the time. He heard two loud pops and saw a man with a limp set the vehicle afire. He also described the clothing of the man and recognized a distinctive flashlight holder or hook on the person. Elmore’s later recantation of his testimony was rejected by the first PCR court as “completely incredible.”

More received a traffic ticket for driving seventy-three miles per hour away from the Quad Cities, where the murder occurred, at 5:45 p.m., which would be consistent with him having committed the murder and leaving immediately. More claimed he had car trouble in Illinois. He called the victim's residence and told one of Townsend's daughters that he would be late. When he arrived at the house at about 9:00 p.m., he did not mention to the victim's daughters that he had seen their mother at the grocery store earlier in the evening. He did not check to see if the groceries had been refrigerated.

More was interrogated by police twice after the murder. He was asked specifically if he was the beneficiary of any life insurance policies on the victim. He said he was not. On the evening of the first police interview, More appeared to become suddenly ill during questioning. He was taken to the hospital. While at the hospital, a cartridge was recovered from the pocket of More's jeans with a bullet the make and size of that used in the murder. When asked how the bullet got in his pocket, More testified, "I have no idea." He was held for two days. Upon release, he was picked up by his ex-wife Bernadette.

After his release from the hospital, police recommenced interrogating More. He walked out of the interrogation session. He drove to Kentucky, where he and his ex-wife Bernadette stayed for two nights in a local motel. More did not attend Townsend's funeral. He said he did not know when it was being held. He claimed to have been concerned about police interest in him.

More traveled across the United States, down through Florida, Texas, Colorado, and eventually into Wyoming. More was aware that a warrant was issued for his arrest during his cross-country trip after speaking with his lawyer. At the time of his arrest, his car was loaded

down with many items, including clothing, maps, a bullet-proof vest, and newly purchased camping equipment.

After reviewing the evidence, we simply do not come to the conclusion that a different verdict would probably have occurred had More had access to the newly discovered scientific evidence. The case, of course, is circumstantial, but that is often so in murder cases. More certainly had motive, he had the means, he was at the right place at the right time, and his behavior generally and repeatedly points in the direction of guilt. Any singular piece of evidence in isolation may not have been convincing, but it was the combination of facts and circumstances that strongly point toward More's guilt.

F. Analysis of Due Process. For the introduction of CBLA evidence to have violated More's right to due process under the United States Constitution, the evidence must have been so inherently unreliable that that even allowing the jury to consider the evidence rendered the trial fundamentally unfair. *Manson*, 432 U.S. at 113, 97 S. Ct. at 2252, 53 L. Ed. 2d at 153; *Walton*, 424 N.W.2d at 446; *Bruns*, 304 N.W.2d at 219. If CBLA is merely unreliable, but its introduction does not rise to the level of fundamental unfairness, then the admission of the CBLA evidence did not violate More's due process rights. *Manson*, 432 U.S. at 117, 97 S. Ct. at 2254, 53 L. Ed. 2d at 155; *Becker*, 818 N.W.2d at 148.

Fewer courts in other states or in the federal system have considered the issue of CBLA and due process than have considered CBLA's change of scientific status as newly discovered evidence, but of those courts that have reached the issue, all have rejected the claim that CBLA evidence violates defendants' due process rights. In the cases that occurred after the FBI sent letters to individual defendants in 2009—

Berry, Bowling, Chalan, and Kretchmar—the defendants undoubtedly received an FBI letter similar to the one that More received which announced that even *implying* that analytically indistinguishable bullets can be associated with a single box of ammunition “exceeds the limits of the science and cannot be supported by the FBI.” Nevertheless, the courts in those cases concluded that implying association with a box of ammunition was either not misleading—*see Kretchmar*, 971 A.2d at 1256—not overstated—*see Berry*, 624 F.3d at 1042—or not so erroneous as to render the trial fundamentally unfair—*see Bowling*, 2012 WL 2415167, at *57–58.

Fundamental unfairness is a high standard and one that was not met here. In addition to the teachings of the non-Iowa courts, the particular circumstances here also suggest that the CBLA evidence did not render More’s trial fundamentally unfair. There was ample other evidence of guilt, as described above. Further, it is entirely possible that the jury assigned relatively low credibility to Asbury’s conclusions in light of Morris’s testimony. Although the CBLA testimony was inaccurate and has been expressly disavowed by the FBI, it was not so pervasively unreliable as to have rendered the trial fundamentally unfair given that More cross-examined the FBI agent thoroughly and presented his own expert witness who questioned the forensic basis of CBLA generally and its interpretation in More’s case and in light of the other, substantial evidence of More’s guilt. We thus conclude that there is no violation of due process under the Fifth and Fourteenth Amendments of the United States Constitution. We reach the same result under article I, section 9 of the Iowa Constitution.

We are, of course, troubled by the errors that infect this case. The violation of doctor–patient privilege, the *Brady* violation, and the offering

of scientifically invalid testimony undermine confidence in our system of justice. The entire CBLA episode, which nationally included instances of perjury⁹ as well as exaggerations and misrepresentations in this case, demonstrates the dangers of a win-at-all-costs philosophy of prosecution. Valid criminal convictions have been jeopardized, and innocent defendants may have been put at indefensible risk.

We certainly recognize that one of the roles of this court is to protect defendants from wrongful convictions when subsequently discovered evidence shows that an error has probably occurred. Yet after examination of the record in this case, we cannot conclude that More's trial, though flawed, was fundamentally unfair in light of the entire record, which points in the direction of More's guilt.

IV. Conclusion.

For the above reasons, we affirm the decision of the district court denying postconviction relief.

AFFIRMED.

⁹See, e.g., *United States v. Chanthadara*, 377 F. App'x 766, 768–69 (10th Cir. 2010) (describing how an FBI scientist admitted to providing false CBLA testimony in two cases).