IN THE SUPREME COURT OF IOWA
Supreme Court No. 24–1123
Wayne County No. PCCV022960

DONNIE LEE WYLDES, JR.,
Applicant-Appellant,

vs.

STATE OF IOWA,
Respondent-Appellee.

APPEAL FROM THE IOWA DISTRICT COURT
FOR WAYNE COUNTY
THE HON. ELISABETH REYNOLDSON, JUDGE

BRIEF FOR APPELLEE

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STATEMENT OF THE ISSUES PRESENTED FOR REVIEW

I. Wyldes claimed that newly discovered evidence would show that the same-gun identifications presented at his 1987 trial were junk science, unreliable, and inadmissible. The parties offered empirical studies that tested examiners in that field and found their false-positive ID rates were usually near 0% and were never greater than 2.2%. So the PCR court ruled that Wyldes's newly discovered evidence did not prove that the same-gun identifications were unreliable/inadmissible, and it would not have changed the result of his trial. Did the PCR court err?

II. Wyldes also raised a due-process claim under *More v. State* and alleged that admission of unreliable scientific evidence violated due process. The PCR court ruled that the studies in the PCR record established that the evidence admitted at his trial was reliable, so using it did not violate due process. Did the PCR court err? And did it err in rejecting the claim on that basis, without re-weighing non-forensic evidence?

III. The PCR court rejected Wyldes's actual-innocence claim because Wyldes's critique of the forensic evidence (even if well taken) did not prove his factual innocence. Did it err?

IV. The PCR court granted summary disposition on claims that arose from evidence that could have been found and raised as grounds for PCR within the three-year limitations period or during one of Wyldes's previous PCR actions. Did it err?

ROUTING STATEMENT

Wyldes requests transfer. *See* App's Br. at 12. But he wants this Court to rule that anyone who was convicted on the basis of expert testimony from a firearm toolmark examiner "did not receive a fair trial" and is entitled to a new trial (or a judicial finding of actual innocence). *See* App's Br. at 29–39 & 59–66. The SPD's Wrongful Convictions Unit and the Innocence Project will keep raising similar challenges until the Iowa Supreme Court weighs in. Two amici have joined the fray, as well. So this appeal presents questions of broad public importance, on a record that both parties developed to enable a ruling on those questions. *See* Iowa R. App. P. 6.1101(2)(d). As such, the State requests retention. *See also id.* at 6.1101(2)(c) & (f).

NATURE OF THE CASE

This is Donnie Lee Wyldes, Jr.'s appeal from a ruling that rejected the claims in his third PCR application. He was convicted of first-degree murder and attempted murder in 1987, for killing Ronald Starnes and trying to kill Ruby Starnes. The key issue at trial was identity. Wyldes gave an alibi that was contradicted by the people he named. He lied to police about shoes that he owned which, from their tread, could have been worn by the killer who tried to kick down the Starnes's door. And he also lied to conceal the fact that he owned a .22 caliber Marlin rifle that could have fired the fatal shots.

Wyldes had told a friend that, four days before the killing, he had fired off a few shots from that rifle at a spot near the Starnes residence. A DCI criminalist examined the spent .22 caliber cartridges that were found at that location. He concluded that they were fired from the same gun that fired the shots that killed Starnes. Wyldes retained his own firearms expert, who *also* concluded that all of those shots were fired from the same gun.

More than 30 years later, Wyldes amended his third PCR application to allege that "advancement in scientific understanding" has now shown that firearm toolmark (FATM) comparison/identification testimony "is lacking in foundational validity and should not [have been] presented at trial." D0010, Amended PCR Application (10/30/20), at 19–42 & 44–45. The PCR court granted the State's motion for summary disposition on almost all of Wyldes's other claims in this third PCR action, because they were time-barred under sections 822.3 and 822.8. *See* D0129, MSD Ruling (4/20/22), at 15–29.

At trial on the merits of the remaining claims, both parties presented evidence on the foundational validity of FATM examiner testimony. Wyldes offered testimony from William Tobin, who said there was a consensus that FATM examiners practiced junk science and that their accuracy rates were "worse than flipping a coin." *See* D0453, PCR Ex. 33; D0562, PCR Tr. vol. 1 (6/27/23), 179:25–190:14. The State countered with empirical studies that

repeatedly showed that FATM examiners had very low false-positive rates. *E.g.*, D0558, PCR Tr. vol. 2 (6/28/23), 243:1–256:6; D0559, PCR Tr. vol. 3 (6/29/23), 35:4–36:14; D0545, State's Post-Trial Brief (12/7/23), at 48–58. The PCR court found "[t]he low error rates provided by various studies and the continued general acceptance of the methodology from courts as well as the scientific community" established that an FATM identification was still "relevant and reliable" evidence and "would be admissible today," over any reliability-related objection. *See* D0548, PCR Ruling (3/31/24), at 10–22. So it rejected Wyldes's challenges and denied his third PCR application.

On appeal, Wyldes argues: **(1)** the PCR court erred in rejecting his newly-discovered-evidence claim; **(2)** it erred in failing to mention certain new evidence in ruling on that claim; **(3)** it erred in rejecting his claim that the newly discovered evidence had proven that he was actually innocent; and **(4)** it erred in granting summary disposition on his time-barred claims.

Statement of Facts

A detailed summary of the facts from Wyldes underlying criminal trial is in D0369, PCR Trial Brief (6/16/23), at 5–30.

Wyldes filed a first PCR application in 1991. It was denied. He filed a second PCR action in 2007. It was dismissed. He sought federal habeas relief, first in 1994 and again in 2010. His petitions were dismissed.

Wyldes filed this third PCR action in 2010. Counsel was appointed. The case stagnated for about ten years. In 2020, PCR counsel asked for leave to amend the PCR application. The PCR court granted it. So Wyldes added new claims that attacked the foundational validity of FATM identifications and shoeprint comparisons. Those claims relied primarily on a 2016 report from the President's Council of Advisors on Science & Technology (PCAST). *See* D0010, at 19–45; *accord* D0426, PCR Ex. 6, PCAST Report.

The State moved for summary disposition. Wyldes resisted. The court granted summary disposition on the PCR claims that could have been raised or discovered within the three-year limitations period or during a prior PCR, but not on claims "related to ballistics analysis and shoe print comparison" or on "[his] resulting actual innocence claim." *See* D0129, at 15–29.

Wyldes's arguments about the validity of FATM comparison

Wyldes seized on the PCAST report's conclusion that existing studies on FATM comparisons were not "appropriately designed" and that "current evidence still falls short of the scientific criteria for foundational validity." *See* D0010, at 23–28 (quoting D0426, at 11–12). PCAST said there needed to be "additional black-box studies to assess scientific validity and reliability." *See* D0426, at 12, 111. It said there was "a single study that was appropriately designed to test foundational validity." *Id.* at 111. That study was AMES-I.

TABLE 1 AMES-I study D0405, PCR Ex. S	Correct answer was same-source ID (n=1,090)	Correct answer was different source (n=2,178)
Correct answer	1,075 (98.6%)	1,421 (65.2%)
"Inconclusive"	11 (1.01%)	735 (33.7%)
Incorrect answer	4 (0.37%)	22 (1.01%)

The PCAST report galvanized researchers to conduct *more* studies. Many were designed to meet PCAST's rigid methodological specifications. One of those was AMES-II. Wyldes retained a metallurgist (William Tobin), who said that the data from AMES-II "backfired on proponents" and showed "examiners are *worse than flipping a coin* in making bullet comparisons and only slightly better than flipping a coin in making cartridge case comparisons." *See* D0453, PCR Ex. 33, at 30–33; D0558, PCR Tr. vol. 2, 118:20–122:15. Tobin had additional criticisms of study design that went beyond anything PCAST had said. *See, e.g.*, D0558, PCR Tr. vol. 2, 164:3–16 & 204:4–206:3.

The AFTE method of FATM comparison

Most FATM examiners hold a certification from the Association of Firearm and Toolmark Examiners (AFTE). This was true in the 1980s, too—both the State's expert (Robert Harvey) and Wyldes's expert (John Cayton) were AFTE-certified and used the AFTE method for FATM comparison. *See* D0409, Trial Tr. vol. 5, 625:17–627:1; D0409, Trial Tr. vol. 6, 873:23–874:12, & 881:1–886:14. Here is a useful summary of FATM-related terminology:

> Toolmarks are impressions left on a bullet or casing from the mechanical operation of a firearm. . . . Toolmark characteristics are denoted as "class" characteristics (those shared broadly by an entire class of firearms), "sub class" characteristics (those shared more narrowly by firearms manufactured using the same equipment around the same time), and "individual" characteristics (those unique to a particular firearm). Individual characteristics derive from microscopic idiosyncrasies on the surface area of a firearm caused by the method of manufacture, wear and tear, use over time, etc.
>
> The AFTE methodology requires the examiner to compare the characteristics of two toolmarked objects to determine whether they are in "sufficient agreement," meaning that they were likely marked by the same firearm. "Agreement is significant when the agreement in individual characteristics exceeds the best agreement demonstrated between toolmarks known to have been produced by different tools and is consistent with agreement demonstrated by toolmarks known to have been produced by the same tool." Similarly, "'sufficient agreement' exists between two toolmarks [when] the agreement of individual characteristics is of a quantity and quality that the likelihood another tool could have made the mark is so remote as to be considered a practical impossibility." The methodology describes itself as "subjective in nature" and relies on "the examiner's training and experience."

United States v. Pete, No. 3:22cr48-TKW, 2023 WL 4928523, at *1 (N.D. Fla. July 21, 2023) (quoting AFTE Theory of Identification, in this record as D0448, PCR Ex. 28). Examiners use a comparison microscope to magnify and view two objects simultaneously, to compare toolmarks. *See* D0565, at 11:15–13:10; D0409, at 673:2–676:6. Examiners usually train by conducting comparison examinations on test-fired items over a 1- or 2-year period, under the supervision of a trained/certified examiner. *See* D0565, at 6:21–7:20.

That training and experience informs their conclusions: if two toolmarks show "more agreement than . . . the examiner [has] ever seen on two bullets [or cartridges] that were fired from different firearms," and if that similarity reaches the level that the examiner typically finds between items that were fired from the *same* firearm, then they make a same-source identification. *See* D0559, PCR Tr. vol. 3, 36:15–39:8; *accord* D0448, PCR Ex. 28.

Subclass characteristics and consecutive-barrel studies

For decades, AFTE and the FATM examiner community have known about subclass characteristics. *See* D0513, PCR Ex. DD, at 12 ("[T]here is a vast amount of literature dealing with this very issue."). The concern is that certain toolmarks might *look* like individual characteristics when they are, in fact, shared by some or all of the guns from the same manufacturing line. The best way to test whether FATM examiners could avoid being misled by subclass characteristics was to use consecutively manufactured components to fire bullets/cartridges, then see whether examiners could correctly identify *which* of those "subclass-mate" guns had fired each of the bullets/cartridges. *See* D0514, PCR Ex. EE, at 7–15. These studies were *not* designed to try to answer grand questions about foundational validity—instead, these studies "create[d] a challenging 'worst-case-scenario' of best nonmatching patterns." *See* D0511, PCR Ex. W, at 20; D0558, PCR Tr. vol. 2, 235:11–237:15.

FATM examiners generally performed extremely well in those studies. Rates of false-positive identifications were generally low, and usually zero. *See, e.g.*, D0401, PCR Ex. Y, at 2–6 & 9; D0406, PCR Ex. U, at 5–16 & 36–38.

PCAST's critique of the consecutive-barrel studies

PCAST criticized those studies. It asserted that their closed-set design made them like "solving a 'Sudoku' puzzle, where initial answers can be used to help fill in subsequent answers." *See* D0426, at 106. And it said when "the correct answer is always present in the collection, . . . examiners can perform perfectly if they simply match each bullet to the standard that is *closest*." *See id.* at 107–08. It claimed that a "partly open set" study (D0406, PCR Ex. U) came out "sharply different than those from the closed-set studies" and that its "false positive rate was roughly 100-fold higher." *See id.* at 108.[1] It praised the AMES-I study as "appropriately designed to test foundational validity" because it presented its test items as "*separate* comparison problems" with a single test-item to compare with a single set of known-source exemplars, and because it included test items where the correct answer was to *eliminate* the exemplars as a possible match for the test item. *See id.* at 109–111. And it called for "additional black-box studies based on the study design of the Ames Laboratory black-box study." *See id.* at 113–14 & 134–35.

[1] That study does not say what PCAST says it says. *See* D0369, at 40–45.

PCAST's methodological critiques were overbroad and overstated. *See* D0511, PCR Ex. W, 9–15 & 19–21. And it bungled its error-rate calculations because of an abject failure to understand what a "false-positive rate" is. *See* D0545, at 48–50. But researchers answered its call for more studies anyway.

The AMES-II study: high difficulty, low false-positive rates

The AMES-II study was designed in accordance with PCAST criteria for validation studies—it was open-set with separate comparison problems, with a large sample set of examiners and test items. *See* D0452, PCR Ex. 32, at 12, 71–72. It also used firearms and ammo that "were specifically chosen to present examiners with a difficult task." The guns were known to impart subclass characteristics (and some parts were consecutively manufactured). And all the ammunition had "steel cartridge case[s] and bullet jackets [that] may not significantly reproduce individual characteristics" that would help make identifications (unlike "softer materials, such as brass"). *Id.* at 18–19; *accord* D0558, 205:6–206:12. All that increased difficulty had little effect on the false-positive rate. Here are the results from the first round of AMES-II:

TABLE 2 AMES-II study D0452, PCR Ex. 32 (cartridges, round 1)	Correct answer was same-source ID (n=1,420)	Correct answer was different source (n=2,835)
Correct answer	1,065 (74.37%)	1,375 (48.50%)
"Inconclusive"	339 (23.87%)	1,434 (50.58%)
Incorrect answer	25 (1.76%)	26 (0.92%)

TABLE 3 AMES-II study D0452, PCR Ex. 32 (bullets, round 1)	Correct answer was same-source ID (n=1,405)	Correct answer was different source (n=2,842)
Correct answer	1,076 (76.60%)	961 (33.80%)
"Inconclusive"	288 (20.48%)	1,861 (65.50%)
Incorrect answer	41 (2.92%)	20 (0.70%)

Accord D0487, PCR Ex. BB, at 5 (reporting on analysis of the same data set).

The AMES-II study also sent the same test kits back out again in two subsequent rounds. In Round Two, each examiner received the same test kit that he or she had already examined in Round One (unbeknownst to them). That tested *repeatability* of results. In Round Three, each examiner received test kits that had already been examined by *someone else*, during Round One. That tested the *reproducibility* of conclusions between examiners. The rates at which positive identifications were repeatable and reproducible were both "generally above expected agreement." *See* D0452, PCR Ex. 32, at 77; *accord id.* at 39–40 (definitions); *id.* at 73–74 ("[T]he general trend toward better observed agreement than expected agreement documents commonality in how the examination process is performed within the profession."); D0545, Post-Trial Brief (12/7/23), at 32–41. And data from across all three rounds showed similarly low rates of false positives: only 0.933% for cartridges and 0.656% for bullets. *See* D0452, at 77. This tended to show that even on these difficult comparisons, false identifications by FATM examiners were very rare.

Wyldes and Tobin had a different view of that data. D0453, at 30–33; D0558, PCR Tr. vol. 2, 118:20–122:15. But Tobin had no idea what it said—he only knew what other commentators said it said (and he could not explain why they said that, or how the data supported what they said about it). *See* D0558, PCR Tr. vol. 2, 216:17–224:7 & 229:4–231:13. Remarkably, in *every single instance* where two different examiners analyzed the same test item and independently made a same-source identification, they were *correct*—582/582 for cartridges, and 601/601 for bullets. *See* D0452, at 46. That is what happened at Wyldes's trial—each same-source identification made by Harvey was confirmed by Cayton, through his own independent analysis. *See* D0409, Trial Tr. vol. 5, 653:15–656:9; D0408, Trial Tr. vol. 6, 883:19–890:17.

Should an "inconclusive" count, in calculating error rates?

Wyldes and Tobin asserted that examiners who knew they were being tested would "hide behind an inconclusive" on difficult comparisons because they "knew that inconclusives would not count against them." *See* D0558, PCR Tr. vol. 2, 130:6–131:9, 178:2–181:5. But Tobin admitted that there was no real data to support his claim that inconclusive rates in empirical studies were higher than a baseline rate of inconclusive answers in FATM casework. *See id.* at 166:11–170:23. FATM examiner Vic Murillo testified on PCR that similar incentives *to be correct and not incorrect* exist in both contexts. *See*

D0565, PCR Tr. vol. 5, 34:7–37:1, 101:24–102:7, & 110:24–111:22. The only data in the record that shed any light on whether inconclusive rates changed when FATM examiners thought they were doing casework (and not a study) came from a truly blind study, where researchers inserted test items into the stream of normal casework for unsuspecting FATM examiners at a crime lab:

TABLE 4 Houston study D0404, PCR Ex. R	Correct answer was same-source ID (n=386)	Correct answer was different source (n=143)
Correct answer	267 (69.2%)	37 (25.9%)
"Inconclusive"	119 (30.8%)	106 (74.1%)
Incorrect answer	0 (0%)	0 (0%)

Cf. D0558, PCR Tr. vol. 2, 175:5–176:13 (agreeing that a smaller blind study at a Dutch crime lab also showed "zero misattributions in either direction"). That inconclusive rate was *higher* than any non-blind study in the record—higher even than AMES-II, which was made as difficult as possible.

Tobin said he did not believe those results because he suspected that the examiners could tell when they were examining test items for a secret study. *See id.* at 170:24–175:4. Tobin also testified that he would *never* believe the results of any purportedly test-blind study, for that reason. *See id.* at 175:5–15. But Wyldes and Tobin cited *lack* of test-blind design as a reason to disbelieve all the *other* studies in the record. *See, e.g.*, D0559, PCR Tr. vol. 3, 81:4–25, 101:3–12; D0544 Attachment (11/9/23), Table 1; *accord* App's Br. at 31.

Wyldes and Tobin went further—they argued that each inconclusive should be counted as an *incorrect identification*, because "the experimenter has access to ground truth, [and they] either know it's a correct response or it's not a correct response." *See* D0558, PCR Tr. vol. 2, 131:10–132:7 & 191:13–193:24; *accord* App's Br. at 32 (calculating and bolding a false-positive rate "counting inconclusives as incorrect"). But Tobin admitted that none of those inconclusive answers were actual false-positive IDs. *See id.* at 197:1–199:15.

PCAST did not treat inconclusives as false-positive errors. Instead, it excluded them entirely—it calculated a false-positive rate as the percentage of false-positive IDs out of *all conclusive* answers. *See* D0426, at 51–52, 107, 153. The State explained why that made no sense. *See* D0545, at 49–51. The best way to gauge the probative value of a FATM examiner's identification is to calculate "the rate at which *correct identifications* occur, as a percentage of *all identifications*." *See id.* The pertinent false-positive rate would be the rate at which *incorrect* identifications occur, among all identifications. *Id.* This also treats inconclusives as neither correct nor incorrect (like PCAST).

Other empirical studies: similarly low false-positive rates

Tobin agreed that subjective comparison techniques are validated through black-box studies, which do not examine "the inner workings" of the process but instead test "whether its outcome is valid and reliable." *See*

D0559, at 34:10–36:10. In other words, "the proof is in the pudding," and if empirical testing establishes high reliability and a low error rate, that shows "whatever they're doing in the black box is working and is reliable." *See id.*

The parties developed a record that included many empirical studies. None of them established a false-positive rate outside the range of 0%–3%; many of them had a false positive rate of 0%. *See* D0545, at 51–52, table 16; *accord id.* at 56 n.11 (noting 0% error rates in consecutive-barrel studies).

Wyldes's challenge to footprint comparison testimony

Wyldes also argued that similar advancements in forensic science proved that the evidence that his tennis shoes could have made the prints on the Starnes's door "is lacking in foundational validity and should not be presented at trial." D0010, at 45. Wyldes retained a forensic science expert (Alicia Wilcox). She determined that "[t]he evidence, in this case, supports the conclusion of 'association of class characteristics.'" *See* D0433, PCR Ex. 17, at 9. That means "[i]n the opinion of the examiner, the known footwear . . . is a possible source of the questioned impression and therefore could have produced the impression"—or it could have been made by "[o]ther footwear . . . with the same class characteristics observed in the impression." *See id.* That was precisely what the jury heard during Wyldes's trial, from experts on both sides. *See* D0409, Trial Tr. vol. 5, 607:18–621:16; D0408, Trial Tr.

vol. 6, 897:7–901:5; D0400, Trial Tr. vol. 7, 925:20–926:3. The PCR court noted that "[t]he conclusion that was reached at the PCR trial by [Wilcox] was the same as the conclusion at the original trial: that the shoes seized from Wyldes' home could have made the impression on the Starnes' door"—so none of Wyldes's newly discovered evidence on footprint comparisons "would have changed the outcome of the trial." D0548, PCR Ruling, at 26.

The PCR court's ruling on FATM comparison evidence

The court rejected Wyldes's claim that his newly discovered evidence had shown that FATM comparison evidence was unreliable to the point of being irrelevant, unfairly prejudicial, or otherwise inadmissible:

> . . . Iowa follows a more liberal view of expert testimony [than *Daubert]* and thus the testimony has a lower bar to clear to be admissible. . . .
>
> Regarding reliability, despite critiques . . . , this Court finds persuasive the opinions in *Pete* and *Romero-Lobato* as well as the dissent in *Abruquah* that the methodology demonstrates relatively low error rates through significant testing and peer review, both before and after the publication of [PCAST]. Further, although it is subject to criticism, firearm toolmark identification still has been deemed admissible by most courts and enjoys general acceptance in the scientific community.
>
> Wyldes has the difficult task of a low bar for admissibility of expert testimony as well as a heavy burden of proving the outcome of the trial would have been different. Wyldes has not accomplished this task. The low error rates provided by various studies and the continued general acceptance of the methodology from courts as well as the scientific community prove that the evidence remains relevant and reliable. Thus, the Court holds that the evidence would be admissible today under Iowa's standard for admission of expert testimony.

> [. . .]
>
> . . . When comparing the firearm and toolmark testimony presented at the PCR trial with the evidence at the original trial, it is not clear that the newly discovered evidence would have changed the outcome. The evidence may have provided Wyldes with more fodder for cross-examining the State's experts and criticizing their methodology, but that is not the standard for this Court to follow. Instead, Wyldes must clear the high bar of proving the outcome would have been different. That burden was not met. Therefore, Wyldes is not entitled to a new trial based on the newly discovered challenges to the firearm and toolmark examination evidence.

See id. at 20–22. The PCR court also rejected Wyldes's claim that the same newly discovered evidence proved his actual innocence. *See* D0551, Ruling (6/11/24), at 1–2.

Additional facts will be discussed when relevant.

ARGUMENT

I. The PCR court did not err in ruling that Wyldes failed to prove that newly discovered evidence would have changed the outcome of his criminal trial.

Preservation of Error

Error was preserved. Wyldes made these arguments below, and the PCR court rejected them. *See* D0544, Brief (12/7/23), at 44–67; D0547, Reply (1/8/24), at 9–28; D0548, PCR Ruling, at 9–26.

Standard of Review

A ruling that denies a PCR claim "based on newly discovered evidence is reviewed for corrections of errors at law." *See More v. State*, 880 N.W.2d 487, 498 (Iowa 2016).

Merits

The PCR court ruled that Wyldes failed to prove that his new evidence "probably would have changed the result of the trial." *See* D0548, PCR Ruling, at 9 (quoting *More*, 880 N.W.2d at 499). It was right.

A. Wyldes's new footwear comparison evidence ended up supporting the conclusion that the jury heard at trial.

Wyldes did not present any expert testimony that his shoes *couldn't* have left the prints on the Starnes's door. All he did was add another name to the list of experts whom the State could call to offer the same opinion that the jury already heard during his trial: his shoes could have left those prints.

See D0562, PCR Tr. vol. 1, 95:19–96:17 & 103:19–22. And the State added yet another (Ken Martin). *See* D0559, PCR Tr. vol. 3, 190:19–191:14.

Wyldes argues that his shoes were seized four months after the killing, and that would be "important information for a jury to consider." *See* App's Br. at 39–41. But that wouldn't affect any of the expert testimony that found a class similarity *in the tread design*, not a positive identification based on some characteristic that would change over time (or based on anything else). D0409, Trial Tr. vol. 5, 607:18–621:16; D0408, Trial Tr. vol. 6, 897:7–901:5; D0400, Trial Tr. vol. 7, 925:20–926:3; D0562, PCR Tr. vol. 1, 96:1–17. And Wyldes never presented evidence from any expert who said that they would *not* reach the same conclusion, in light of that time gap. And the PCR court was correct that the time gap, itself, was "not newly discovered." *See* D0548, PCR Ruling, at 26; *accord* D0409, Trial Tr. vol. 5, 695:16–696:21. Wyldes failed to show that his newly discovered evidence would have had any effect on any footwear comparison expert's opinion or on the outcome of the trial.

B. None of Wyldes's challenges establish any problems with specific parts of Harvey's testimony.

Before his generalized challenge to *all* FATM comparison testimony, Wyldes attacks three specific bits of Harvey's testimony from his trial. *See* App's Br. at 23–29. None of those attacks have merit.

1. Harvey (and Cayton) testified that the shots at the Starnes residence and the shots on the gravel road were fired from the same gun. That is permissible.

Wyldes argues that FATM examiners who make a same-source ID generally do not use grandiose language like "I know there's no other gun in the world that could have made that mark." *See* App's Br. at 23–24 (quoting D0440, PCR Ex. 25, 92:5–8). But they still testify that two shots "were fired from the same gun" when their examination supports a same-source finding. *See* D0440, PCR Ex. 25, 20:21–21:16. Nowadays, FATM examiners usually explain that what they mean is that it is a "practical impossibility" that the two shots were fired by different guns. *See id.* at 91:8–92:11; *accord* D0439, PCR Ex. 24, 134:2–135:24. But same-source ID still means the same thing. *See* D0565, PCR Tr. vol. 5, 74:22–75:20; *cf.* D0447, PCR Ex. 27, at 137–38 (explaining "practical impossibility" in the context of FATM same-source ID means that finding another gun that could impart the matching toolmarks is "an event that has an extremely small probability of occurring in theory, but which empirical testing and experience has shown will not occur.").

During Wyldes's trial, neither Harvey nor Cayton described a match using the kind of language that Wyldes or PCAST are criticizing. *See* App's Br. at 23–25 (citing D0426, PCR Ex. 6, at 19). They just said that the shots "were fired from the same gun." *See* D0409, Trial Tr. vol. 5, 632:9–634:23

& 654:16–656:9; D0408, Trial Tr. vol. 6, 888:23–889:24; D0400, Trial Tr. vol. 7, 923:11–16. That is the kind of testimony that FATM examiners still offer today, when the evidence supports a same-source identification. *See, e.g.*, *State v. Petties*, No. 17–0662, 2019 WL 480300, at *2 (Iowa Ct. App. Feb. 6, 2019) (noting Murillo testified the casings and bullets he examined were "fired from the same weapon"); *State v. Schroeder*, No. 16–1786, 2018 WL 2230542, at *6 (Iowa Ct. App. May 16, 2018) (noting Murillo examined multiple items and then testified that they "were all fired by the same gun"). Wyldes offered no evidence that could establish otherwise. Nor can Wyldes show that the result at trial probably would have been different if they had used different language to describe the same findings.

Wyldes also attacks Harvey's description of a mark on the casings as "very unique." *See* App's Br. at 23–25. But Harvey could truthfully testify that he "had never seen anything quite as severe in all of the casings that [he had] looked at." *See* D0409, Trial Tr. vol. 5, 634:8–23; *accord* D0558, PCR Tr. vol. 2, 190:24–191:12 (Tobin agreeing). Harvey described how the casings were split by a deep gouge down the side. That gouge was "so deep in fact that it would roll up this brass" at the end of casings, while "gouging the nose of the bullet also." *See* D0409, Trial Tr. vol. 5, 634:8–637:2. Harvey did not imply that the mere existence of that kind of gouge was enough to

make a same-source ID; he *declined* to make same-source IDs for casings that were recovered from other locations where Wyldes fired his .22 Marlin, even though those casings all had a similar gouge. *See id.* at 642:17–650:7. Cayton even said those casings from other locations *could not* have been fired from the same gun as the shots from the scene and the gravel road (this was where Harvey and Cayton disagreed)—despite their similar gouges, all down the length of each casing. *See* D0400, Trial Tr. vol. 7, 907:14–918:14. So both experts said this kind of gouge was not so "unique" that it forced an ID. *Cf. id.* at 942:11–19 (Cayton explaining that split casings are "not too uncommon," but "[i]t is very unusual" to see casings split "from this groove in them").

Harvey specified that his same-source ID findings were based on "the firing pin impressions" and "individual markings in that gouge" that he saw on the casings from the scene and the gravel road. *See* D0409, Trial Tr. vol. 5, 655:8–656:9. So did Cayton. *See* D0408, Trial Tr. vol. 6, 888:23–889:24; *accord* D0565, PCR Tr. vol. 5, 173:4–175:16 (Murillo explaining how a gouge of sufficient size in a shell casing can "leave a lot of individual characteristics across the width of that gouge"). They stated that same-source ID conclusion in straightforward language, which is permissible. Moreover, Wyldes cannot prove that the result of trial would have been different if they had used the "practical impossibility" language to convey the same essential finding.

2. Harvey explained how it was possible that a single gun *could have* fired both the casings with shallow gouges and the fully-split-open casings: if a burr in the barrel was growing larger over time. That is permissible.

Wyldes complains that there was no "scientific basis" for Harvey's "made-up theory of 'progressive deterioration.'" *See* App's Br. at 27–28. But it was a theory that was based in his experience and familiarity with firearms and their design and function. The idea was that dry-firing a Marlin .22 rifle (without ammunition loaded) would cause the firing pin to strike the barrel "at the lip of the chamber"—and "if done enough, it will begin to deform the chamber right there at the place where the firing pin is coming in contact and it will flare that up and produce a burr," which is what gouged and split the shell casings. *See* D0409, Trial Tr. vol. 5, 634:21–636:5. Harvey called the manufacturer, who confirmed that they were aware of that happening in other cases. *See id.* at 678:20–679:2; D0450, PCR Ex. 30, at 58 (Harvey documenting that a Marlin representative said this was a known issue—but still "not a prevalent one"—and that it arose in older models from repeated "firing pin contact" with the actual chamber, which only happens if the rifle is dry-fired "on many occasions"). Cayton agreed it was possible that a burr would produce shallow gouges, then get progressively worse until the casings "were completely split." *See* D0409, Trial Tr. vol. 7, 942:20–943:13. Murillo confirmed that he would expect dry-firing to have this effect, over time. *See*

D0565, PCR Tr. vol. 5, 157:13–158:18. Indeed, even Tobin had to admit that logically, a burr inside the barrel would not have been present when the gun was manufactured. So he could not say that Harvey's theory was wrong. *See* D0558, PCR Tr. vol. 2, 184:7–185:22. Tobin said his real problem with that testimony from Harvey was that Harvey was "ignoring the possibility" that a different gun had fired the shots at the other locations. Tobin was wrong. Harvey specifically recognized that possibility—and he said so, at trial. *See id.* at 150:6–151:24; D0409, Trial Tr. vol. 5, 668:22–672:15.

Given that, it is no surprise that Harvey did not make any positive same-source identification for the casings that were found in other locations where Wyldes had fired his .22 Marlin. *See* D0409, Trial Tr. vol. 5, 643:11–649:11. Harvey only testified to an association of some characteristics and an absence of a basis for elimination. Even under Wyldes and Tobin's view of the limitations of FATM comparisons, that would still be permissible. *See* D0453, at 33–34; D0558, PCR Tr. vol. 2, 147:13–149:5 & 151:25–154:10. So Wyldes's newly discovered evidence that critiques FATM comparisons, even if taken at face value, could not have prevented Harvey from testifying that one Marlin .22 rifle could have fired all of those shots (and explaining how). *Cf., e.g.*, *Abruquah v. State*, 296 A.3d 961, 968 (Md. 2023) (adopting limits on FATM comparison testimony that would not prohibit this testimony).

3. Harvey examined 18,000 casings from one firing range where Wyldes fired his .22 Marlin. He testified that he found this kind of gouge on 91 casings—or 0.5% of the 18,000 he examined. That is factual and permissible.

Harvey spent weeks examining 18,000 casings from a firing range in Cedar Rapids where Wyldes had previously fired his .22 Marlin. *See* D0411, Trial Tr. vol. 3, 336:22–337:19; D0409, Trial Tr. vol. 5, 643:11–644:9. From that 18,000, he found 91 that had a gouge down the side. Though shallower, it was the "same type of problem" noted in all of the casings from the scene and the gravel road. *See id.* at 644:13–651:8. Since he had already "gone to all the trouble" of examining 18,000 casings, he did the easy arithmetic too: 91 was 0.5% of 18,000, which meant that he had found this kind of gouge on 0.5% of the casings "that [he] looked at." *See id.* at 652:19–653:5.

Wyldes argues that Harvey was "not properly qualified" to make that calculation. *See* App's Br. at 28–29. But arithmetic requires no special skill. And if it is done wrong, anyone with a calculator can figure it out and say so. This is "[a] mathematical calculation well within the ability of anyone with a grade-school education," so no particular qualifications were necessary. *See Bryant v. Farmers Ins. Exchange*, 432 F.3d 1114, 1124 (10th Cir. 2005). Tobin agreed there was no problem with that kind of descriptive testimony about the casings Harvey examined and the prevalence of similar gouges in that specific group of casings. *See* D0558, PCR Tr. vol. 2, 154:11–155:20.

C. Both Harvey and Cayton used essentially the same AFTE theory and FATM comparison techniques that FATM examiners use today. It was not substandard.

Wyldes attacks Harvey's procedure as "woefully sub-standard." *See* App's Br. at 25–26. But Murillo testified that he reviewed Harvey's notes from when he examined the evidence in this case. He concluded that Harvey did essentially what *he* would do, if he examined that evidence in a lab today (just with far less documentation). *See* D0565, PCR Tr. vol. 5, 9:22–13:10 & 28:9–31:10; *accord* D0415, PCR Ex. H, Murillo's Report ("[T]hese methods were and continue to be widely accepted and utilized by experts in the forensic firearms community."). Wyldes complains that "Harvey's conclusions were not verified by a second examiner" and also that "jurors were compelled to simply accept Harvey's claims." *See* App's Br. at 26–27. But Wyldes retained Cayton and had him examine the very same evidence. If Harvey's analysis was flawed, then Cayton could say so (and explain why). But as it turned out, Cayton *agreed* with each of Harvey's same-source identifications. *See* D0408, Trial Tr. vol. 6, 883:19–890:17. Cayton used essentially the same comparison technique that Harvey did—the main differences were that Cayton also took measurements with a micrometer and supplemented his notes with photos. *See id.* at 888:1–891:15. His photos made the same-source ID unmistakable; jurors saw that for themselves. *See* D0400, Trial Tr. vol. 7, 907:14–909:21.

To the extent that Wyldes insinuates that an FATM examiner in 2024 who worked in an accredited lab with standard operating procedures and QA would have testified to conclusions that differed from Harvey's or Cayton's, he failed to prove that. Moreover, even then, Cayton had already developed and "put into effect" programs for proficiency testing and for "reexamination and verification [of results] by other experienced examiners" in his own lab. *See id.* at 921:24–923:2. And Cayton documented his analysis with photos. So to the extent Wyldes is suggesting that the absence of any of that caused Harvey to make a same-source ID that he would not otherwise have made, the fact that Cayton *also* made those same-source IDs proves otherwise.

D. A same-source identification from an FATM examiner is generally reliable evidence that two shots were fired from the same gun. That reliability makes it probative. And that probative value makes it admissible.

Wyldes is right about one thing: over the years since his trial in 1987, AFTE-certified FATM examiners and labs have adopted standard practices to ensure that every comparison is "documented and verified." *See* App's Br. at 25–26. That includes quality assurance (QA), typically involving review of conclusive determinations by a second qualified examiner. *See* D0565, PCR Tr. vol. 5, 77:21–78:12. That includes documentation requirements. *See id.* at 9:22–13:10. That includes periodic proficiency testing, accreditation, and standard operating procedures (SOPs). *See id.* at 8:3–21 & 16:1–19:5; *accord*

D0422, PCR Ex. 2, 30:5–32:25; D0424, PCR Ex. 4, 17:4–27:10. Researchers and examiners have not rested on their laurels. Decades before PCAST, the AFTE community was discussing and studying subclass characteristics, to understand their impact on the theory of identification and to guard against potential misidentifications. *See* D0514, PCR Ex. EE, at 7–15; D0513, PCR Ex. DD, at 12–14; D0559, PCR Tr. vol. 3, 16:14–18:7; *accord id*. at 7:7–8:15 (discussing publications that educate FATM examiners about subclass issues and recognizing that "awareness of the problem certainly does improve the skill level and abilities of a forensic firearms examiner"). When PCAST called for more empirical studies that followed a very specific experimental design, researchers answered the call. Those studies, too, found false-positive rates that were (as Wyldes puts it) "vanishingly low." *See* App's Br. at 29–30.

Still, Wyldes argues all of that is worthless because "a chorus of neutral and esteemed scientists have roundly critiqued the notion that FATM examination in casework can boast the vanishingly low error rates reported in existing studies." *See* App's Br. at 29–30. A group of professors make the same argument in an amicus brief. *See* Amicus Br. (10/1/24).[2] But

[2] The other amicus brief, from the Innocence Network, argues that Wyldes should "be afforded the opportunity to prove his actual innocence during an evidentiary hearing or new trial." *See* Amicus Br. (10/17/24), at 24–25. That evidentiary hearing already happened. This is Wyldes's appeal from a ruling that he failed to prove his actual innocence at that hearing.

try as they might, FATM critics cannot come up with any reason to reject those empirical studies that withstands scrutiny. Nor can they locate even *one* study with a false-positive error rate that would support their claim that dramatic reliability/validity problems are lurking just beneath the surface. No such problem exists. That is why most courts to consider these challenges after PCAST have rejected them. This Court should do the same.

1. FATM examiners self-select for (most) studies, but there is no reason to believe that those volunteers differ from FATM examiners who do not participate.

First, Wyldes argues that self-selecting study participants "may be more experienced than the general population of FATM examiners." *See* App's Br. at 33. This is speculation, at best. *See* D0487, State's Ex. BB, at 12 ("There is no empirical basis for an assumption of superior performance by those who opted for participation."). Generally, empirical studies find there is little difference between the accuracy of *more* experienced examiners and *less* experienced (but fully certified) examiners. *See* D0558, PCR Tr. vol. 2, 210:2–11; D0452, at 66–67; *accord* D0512, PCR Ex. CC, at 25 (74 examiners ranged "from 1 year of experience to 50+ years" but "none of [that] appeared to have an effect on the results of the test"); D0406, at 34 (level of experience had no statistically significant effect on test accuracy or error rate). There is no evidence showing that study participants differ from non-participants in

any meaningful way. And AFTE-certified examiners at accredited labs can't dodge mandatory proficiency testing or QA review of their results. *See* D0565, 14:22–17:21 & 92:17–93:12. Nor can they insulate their work from re-analysis, cross-examination, and adversarial stress-testing. *See id*. at 26:11–27:7. So becoming an AFTE-certified FATM examiner means self-selecting for a role where FATM comparisons are scrutinized as a matter of course (often with high stakes and career-defining consequences for any incorrect ID). *See, e.g.*, D0400, Trial Tr. vol. 7, 920:25–923:2. So there is no reason to suspect that validation study participants differ from other FATM examiners in any way that would undercut the external validity of those studies.

2. AMES-II shows that error rates for FATM examiners who complete studies do not differ significantly from error rates for examiners who drop out.

Wyldes claims that study drop-outs create a survivorship bias "if the participants that are the source of missing data are 'systematically different' from those who complete the study." *See* App's Br. at 39. But AMES-II had multiple rounds, so researchers could compare data from FATM examiners who dropped out after Round One (like Murillo) with those who completed the whole study. They found "no significant difference between the accuracy of examiners who withdrew from the study and those who remained." *See* D0487, at 13; D0558, PCR Tr. vol. 2, 216:4–218:1. Examiners who drop out

of studies (or who don't join to begin with) are not "systematically different" in any way that affects the validity of their comparisons—they're just busier. *See* D0565, PCR Tr. vol. 5, 20:1–21:4 (Murillo explaining that he was directed to withdraw from AMES-II after Round One, because the study required too much of his time and there was a backlog of casework); D0452, at 15 (noting "comments from withdrawing examiners overwhelmingly stated that they simply did not have enough time to complete both their assigned duties and the additional work asked of them by the study," and that "[u]niversally the volunteers regretted that they were not able to continue with the study"). AMES-II data showed study drop-outs did not have an elevated error rate, which undercuts Wyldes's speculative arguments about survivorship bias.[3]

3. Evidence from AMES-II and from a blind study shows FATM examiners are *more* likely to use "inconclusive" as a conclusion in casework than in empirical studies (even when the study is designed to be very difficult).

Wyldes argues that the "level of difficulty" in empirical studies does not support external validity. *See* App's Br. at 34. He also argues "it is impossible to know if the large number of 'inconclusive' responses [in empirical studies] would shift to erroneous 'identifications' in casework, where examiners face

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[3] The claim that studies "have not reported their rates of missing data" is also false. *See* App's Br. at 39. Almost every study includes information on how many test kits were distributed and how many responses were received. *See, e.g.*, D0405, at 8–9; D0516, PCR Ex. GG, at 3.

different pressures and incentives." *See id.* at 38–39. Wyldes claims Murillo agreed with his concerns about those incentives. But Murillo explained that those hypothetical gamified incentives were both contingent on knowledge about how "inconclusive" results would be scored (which participants would rarely have) *and*, even then, uncompelling to those examiners who want to "come up with the right answer." *See* D0565, PCR Tr. vol. 5, 110:15–112:21; *accord id.* at 101:16–102:4. Claims that study participants are responding to incentives to mark "inconclusive" are baseless, especially after PCAST:

> Ames II was conducted in response to PCAST, . . . and the firearms examiner community was acutely aware of PCAST when it was published. Thus, although [defense expert] Faigman and the Majority assume that the participating examiners "knew" that inconclusives would not be counted against them and consequently over-relied on them, it is just as likely that examiners assumed that inconclusives would be accounted for in the manner advocated by PCAST, with every inconclusive driving up the [potential] error rate.

Abruquah, 296 A.3d at 1014 (Gould, J., dissenting). That AMES-II data shows inconclusive rates for difficult comparisons in a study environment. *See* D0452, at 66; D0487, at 5. They are higher (for both same-source and different-source comparisons) than inconclusive rates in almost any other study in the record.[4] This suggests that *the toolmark comparison itself* has more of an effect on inconclusive rates than any extrinsic incentive.

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[4] There is a notable exception, as discussed in D0545, at 23–25.

And yet, inconclusive rates in the only *test-blind* study in the record were higher still. *See* D0404, at 5. FATM examiners who thought they were doing casework were *more* likely to mark "inconclusive" than examiners in the most difficult study that researchers could design. *See* D0487, at 5. This suggests that FATM examiners are more cautious in casework than in studies. And it means Wyldes and Tobin are incorrect to assert (without any evidence) that different-source inconclusive answers in validation studies are likely to become incorrect identifications in casework.

Also, remember that PCAST didn't call for test-blind studies. It called for studies that were designed like AMES-I. *See* D0426, at 113–14 & 134–35. *None* of Wyldes's methodological critiques that have been addressed thus far were embraced by PCAST. The AMES-I study had self-selecting participants; some dropped out; and they all knew they were participating in a study. *See* D0405, at 8–9. Even so, PCAST said that study was "appropriately designed to test foundational validity." *See* D0426, at 111. When Wyldes (and amici) fault AMES-I and subsequent validation studies for using that same design, they are moving the goalposts. *See, e.g.*, D0559, PCR Tr. vol. 3, 139:8–23; Amicus Br. at 16–21. Of course, there is *more than one* correct way to design a useful empirical study—the test-blind study is a case in point. *Cf.* D0511, at 14–15. But following PCAST's design specifications should be a safe harbor.

4. Inconclusive comparison results in empirical studies do not undermine external validity. To the contrary, patterns in that data help *establish* external validity.

Amici point out something that is worth mentioning: "In AMES-I, . . . more than 20% of test-takers labeled *every* different source cartridge case comparison . . . as inconclusive." *See* Amicus Br. at 22 n.6; D0405, at 16. The study authors explain that these are examiners "who through training or agency policy choose only to report inconclusive conclusions in the absence of an identification or class characteristics differences that would lead to an elimination" (and studies rarely involve eliminations on class characteristics). *See* D0405, at 19. So add amici and all their cited sources to the frustratingly long list of advocates and commentators who opine on this without engaging with the explanation that FATM examiners and researchers *always give* for this pattern in the data: that many labs and agencies have policies that only allow examiners to make eliminations on differences in *class* characteristics (or if a firearm is recovered and available for repeated test-firing). *See* D0558, PCR Tr. vol. 2, 199:16–203:1; D0515, PCR Ex. FF, at 3; D0545, at 21–22. If those study participants mark "inconclusive" for a different-source test item, that answer is *correct*—it reflects the answer that they *should* give, when an identical comparison is submitted in their casework. And it's the answer that they *would* give—which is the *sine qua non* of external validity.

Also, in most studies, examiners are "picking almost all the fruit off the tree." *See* D0558, PCR Tr. vol. 2, 241:3–244:10. If study participants were responding to perverse incentives to spam inconclusive results, then they wouldn't try to make many identifications (because an ID is the only answer which, if incorrect, can increase the false-positive rate). They surely would not make *almost every possible* correct identification. And yet:

TABLE 5 Keisler et al study D0407, PCR Ex. V	Correct answer was same-source ID (n=1,512)	Correct answer was different source (n=1,008)
Correct answer	1,508 (99.7%)	805 (79.9%)
"Inconclusive"	4 (0.26%)	203 (20.1%)
Incorrect answer	0 (0%)	0 (0%)

Cf. D0545, at 51–52, column 2. The amici's only real criticism of this study is that "the author counted inconclusives as correct answers." *See* Amicus Br. at 27–28. No, they didn't. They just didn't classify inconclusive answers as false-positive IDs—because they weren't. They were instances in which the examiner declined to make a same-source ID. *See United States v. Rhodes*, 3:19-cr-00333-MC, 2023 WL 196174, at *4 (D. Or. 2023) (explaining that an inconclusive result "is not an error in the sense that it falsely attributes a cartridge or casing to the wrong firearm"). In any event, if examiners were spamming inconclusive responses to avoid error, study data would show an excess of *missed identifications*, not just missed eliminations. But the data, time and again, shows otherwise. *E.g.*, D0405, at 15–18; D0512, at 21–22.

Here's a new study, which is discussed in the academic commentary that was cited in the amicus brief (though never mentioned by amicus):

TABLE 6 Guyll et al study (difficult Beretta task)	Correct answer was same-source ID (n=454)	Correct answer was different source (n=451)
Correct answer	397 (87.4%)	272 (60.3%)
"Inconclusive"	56 (12.3%)	178 (39.5%)
Incorrect answer	1 (0.22%)	1 (0.22%)

TABLE 7 Guyll et al study (standard HiPoint task)	Correct answer was same-source ID (n=457)	Correct answer was different source (n=449)
Correct answer	454 (99.3%)	300 (66.8%)
"Inconclusive"	3 (0.66%)	145 (32.3%)
Incorrect answer	0 (0%)	4 (0.89%)

Max Guyll et al., *Validity of Forensic Cartridge-Case Comparisons*, 120(20) PNAS 1 (2023), https://doi.org/10.1073/pnas.2210428120. Again, even on difficult comparisons, examiners tried for the vast majority of possible IDs, and they were almost always correct when they did. And inconclusive rates for different-source items reflect the fact that "18% of examiners never made an elimination decision," in line with "policy of some laboratories to prohibit elimination decisions solely on the basis of . . . individual characteristics." *Id.* at 8. So, yet again, those examiners were giving the same answer that they *should* and *would* give, if this were casework—hence, external validity. And the test-blind study undercuts the claim that inconclusive answers in studies become incorrect same-source IDs in casework. *See* D0404, at 5.

5. Empirical studies show that false-positive error rates are very low. An FATM examiner's same-source ID is a very good predictor of ground truth. Both logically and empirically, a positive ID from *two* FATM examiners is even better and has even more probative value.

Wyldes stakes everything on methodological critiques and his column where false-positive rates are inflated by "counting inconclusive as incorrect." *See* App's Br. at 30–39. Neither Wyldes nor amici identify a study that reports error rates that support their challenge. Instead, they ask this Court to reject "the vanishingly low error rates reported in existing studies." *Id.* at 29–30.

Those error rates *are* very low. If a false-positive rate is the likelihood that any given same-source ID is incorrect, then the studies in the record have false-positive error rates between 0% and 2.11%—most are even below 1%. *See* D0545, at 51–52; *accord United States v. Harris*, 502 F. Supp. 3d 28, 39 (D.D.C. 2020) (considering a group of eleven studies spanning 20 years with false positive rates between 0% and 1.6%). That means a same-source ID is generally reliable evidence that two shots were fired from the same firearm. *Cf.* Guyll et al., at 6 (noting ID was "highly predictive of same-source status").

What about *two* examiners? If these empirical studies have one flaw, it's that participants can't use their normal QA process. *See* D0405, at 6, 19; D0558, PCR Tr. vol. 2, 194:10–196:4 & 233:20–234:20. QA usually involves review by a second certified examiner, to reduce the risk of false positives.

See D0565, PCR Tr. vol. 5, 15:17–25. Even accepting PCAST's estimate of the upper-bound error rate (2.2%), "the probability of a false positive with two examiners would be about 0.05%." *See United States v. Chavez*, No. 15-CR-00285-LHK-1, 2021 WL 5882466, at *4 & n.2 (N.D. Cal. Dec. 13, 2021).

2.2% overestimates the false-positive rate, so the actual two-examiner false-positive rate is even lower. Wyldes and amici claim that repeatability and reproducibility data from AMES-II were "abysmal"—but they're using data from *all* reported conclusions, not just same-source IDs. *See* App's Br. at 38–39; Amicus Br. at 27. The State demonstrated that a same-source ID in Round One was usually a great predictor of a repeated ID on Round Two and a reproducible ID on Round Three. *See* D0545, at 32–37. But all that is beside the point, because this is about error rates—the proof in the pudding. Of all the 1,183 instances where two different examiners each independently made a same-source ID (582 for cartridges, and 601 for bullets), they were *never* wrong—*not once* in this large dataset of difficult FATM comparisons. *See* D0452, at 46; *cf. Abruquah*, 296 A.3d at 1025–27 (Gould, J., dissenting) (noting AMES-II data shows "independent examinations by two examiners almost never produce false positives," and also that "subsequent review by the same examiner, and especially by a different examiner, is likely to catch errors and steer toward ground truth"). So when two examiners agree on a

same-source identification—as Harvey and Cayton did, at Wyldes's trial—that conclusion is extremely reliable and overwhelmingly likely to reflect the ground truth. *Accord Pete*, 2023 WL 4928523, at *5. And so, at long last:

6. Because an FATM same-source ID is generally reliable, it's probative and helpful. That makes it admissible.

Most courts follow *Daubert*. Iowa takes a more liberal approach to admissibility of expert testimony applying specialized/technical knowledge. *Ranes v. Adams Laboratories, Inc.*, 778 N.W.2d 677, 685–86 (Iowa 2010); *State v. Hall*, 297 N.W.2d 80, 85 (Iowa 1980) (using "ballistics comparison" as example of an area that is more technical and less scientifically complex). The test is whether a scientific/technical methodology "produces results that are reliable enough" to be "relevant in assisting the trier of fact." *See Ranes*, 778 N.W.2d at 685. The PCR court found same-source IDs by AFTE-certified FATM examiners were generally reliable and thus probative and admissible because "the methodology demonstrates relatively low error rates through significant testing and peer review." *See* D0548, at 20. As shown above, it was correct. Same-source IDs by certified FATM examiners have a very low false-positive rate, as shown by empirical studies in the record (and others).

The PCR court also noted that "firearm toolmark identification still has been deemed admissible by most courts and enjoys general acceptance in the scientific community." *Id.* Wyldes disputes this. *See* App's Br. at 29.

But the PCR court was correct. *See, e.g.*, *United States v. Brown*, 973 F.3d 667, 703–04 (7th Cir. 2020) (affirming ruling that noted that "firearm and toolmark analysis is widely accepted beyond the judicial system"); *United States v. Richardson*, No. 19-20076-JAR, 2024 WL 961228, at *5–9 (D. Kan. Mar. 6, 2024) (noting "the field, as well as the academy, has and continues to appropriately respond with more studies and more stringently designed studies of this important area of forensic science" which "still enjoys general acceptance among firearms examiners"); *United States v. Graham*, No. 4:23-cr-00006, 2024 WL 688256, at *5–14 & n.10 (W.D. Va. Feb. 20, 2024) (same); *cf. State v. Raynor*, No. HHD-CR13-0667367, 2024 WL 3579515, at *3–12 (Conn. Super. Ct. Apr. 16, 2024); D0545, at 46–47 (collecting similar cases that that were available during briefing below).

Wyldes failed to establish that same-source IDs from FATM examiners are unreliable. The record establishes the opposite. Every empirical study in the record found a low false-positive rate. From the consecutive-barrel studies that predated PCAST, to the open-set studies PCAST said were "appropriately designed to test foundational validity," to the studies with unique designs—*all of them* found low false-positive rates. That is the proof in the pudding that establishes foundational validity and reliability. And that, under *Ranes*, makes those identifications admissible and forecloses Wyldes's challenge.

E. Because Wyldes's newly discovered evidence would neither preclude the FATM same-source ID testimony from Harvey and Cayton nor meaningfully undercut it, Wyldes can't show it would affect the trial's outcome.

Wyldes argues that his challenge wasn't *just* a claim that new evidence would have prevented the admission of FATM same-source IDs. He argues that he also alleged and proved that his newly discovered critique of FATM would have changed the result even if it was just admitted "alongside" both Harvey and Cayton's same-source IDs. *See* App's Br. at 50–51. That is not what Wyldes alleged. *See* D0010, at 44–45. Wyldes was focused on showing that the result would have been different "absent the [FATM] and [footprint] testimony." *See* D0544, at 64–67. Wyldes walked back from that in briefing below, as the weight of the empirical research became clear. *See* D0547, at 18 (arguing "he would today have a trial in which any State evidence would come in alongside a significant, detailed, and thoughtful scientific critique"). But his whole challenge and all of his proof at the evidentiary hearing was aimed at the trial court's gatekeeping function, and rightly so. He never argued or proved the substantive admissibility of any broad critique of FATM generally or any hyper-technical critique of individual validation studies—none of which would have helped the jury determine a fact at issue. *See, e.g.*, *United States v. Randolph*, 2024 WL 1703643, at *2–8 (M.D. Fla. Apr. 19, 2024) (excluding Dean Faigman's proposed testimony "regarding the inclusion or exclusion of

inconclusive results from the calculation of the generalized error rate" and his other critiques of FATM evidence because it "is not particularly probative with respect to the issues in this particular case" and because it "would also be confusing and risk misleading the jury").

The PCR court gave Wyldes the benefit of the doubt by assuming that his newly discovered evidence "may have provided [him] with more fodder for cross-examining the State's experts and criticizing their methodology"—but even that fell short of "proving the outcome would have been different" in light of "the evidence at the original trial." *See* D0548, at 22. Wyldes says it misapplied the standard, failed to consider the full record, and reached a result that the record doesn't support. *See* App's Br. at 48–51. He is wrong. It is hard to pinpoint what *precisely* Wyldes is arguing that he would offer "alongside" the State's forensic evidence. Would he offer AMES-II data, or open the door to its admission? If so, jurors would hear the State explain why Harvey and Cayton's independently-reached same-source IDs "sit at the highest apex of reliability and relevance." *See* D0545, at 31–37; *accord Davis v. State*, 383 So.3d 743, 757–58 (Fla. 2024) (holding trial counsel was not ineffective for failing to call an expert who "criticized the AFTE theory of identification as lacking in scientific reliability" because the record still would have shown that the AFTE method is reliable and generally accepted).

Would he offer Wilcox's testimony that his shoes could have left the prints on the Starnes's door? *See* D0562, PCR Tr. vol. 1, 95:19–96:17 & 103:19–22. That was what both footprint experts already said at trial. Wyldes's evidence might have *prolonged* the presentation of forensic evidence—but that's it.

"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 More*, 880 N.W.2d at 499. Wyldes failed to meet it, and the PCR court was correct to reject his newly-discovered-evidence claim.

II. The PCR court did not ignore crucial areas of new evidence. Wyldes did not prove a due-process violation.

Preservation of Error

Wyldes filed a 1.904 motion, arguing the PCR court failed to consider various parts of the record. *See* D0549, Motion (4/15/24). The PCR court added a ruling on Wyldes's actual-innocence claim, but it ruled that the rest of his motion had not raised "any arguments or issues not already addressed and considered by the Court." *See* D0551, at 2. And it had already ruled on Wyldes's due-process challenge. *See* D0548, at 26–28.

Standard of Review

Rulings on PCR claims that allege due-process violations are reviewed *de novo*. *See More*, 880 N.W.2d at 499.

Merits

This Division of Wyldes's brief alleges that the PCR ruling failed to consider important facts. But it contains no citations to the record, nor any descriptions of facts that the PCR court failed to address. *See* App's Br. at 59–64. In place of any of that, Wyldes argues that his due-process rights were violated when the State offered "grossly unreliable scientific evidence" during his trial. *See id.* As shown above, a same-source ID from a certified FATM examiner is generally reliable, and even more so when confirmed by a second FATM examiner's independent analysis. The PCR court found that Wyldes could not establish a due-process violation because "the low error rates provided by various studies and the continued general acceptance of the methodology from courts as well as the scientific community prove that the evidence remains relevant and reliable." *See* D0548, at 26–28. Nothing in this part of Wyldes's brief makes an argument that could establish error in that ruling or establish any right to relief.

Division I of Wyldes's brief has a subpart where Wyldes discusses other evidence from his underlying criminal trial. *See* App's Br. at 41–48. That is the same "critical evidence" that he complained that the PCR court did not consider in its ruling. *See* D0549, at 19–24. Wyldes cites to parts of the PCR court's ruling—so obviously, the PCR court mentioned those facts.

But Wyldes is right that the PCR court did not engage with his attempts to re-argue the weight of *non-forensic* evidence from his 1987 trial. It didn't have to, because it found that Wyldes's newly discovered forensic evidence didn't meaningfully discredit the reliability of the *existing* forensic evidence. *See* D0548, at 20–22, 26, & 27–28.

Hypothetically, what if it had? Then the PCR court would have needed to determine whether admitting unreliable forensic evidence made the trial "fundamentally unfair in light of the entire record," on the due-process claim. *See More*, 880 N.W.2d at 511–13. And it would need to determine whether limiting the forensic experts' testimony to exclude that unreliable evidence or presenting the evidence that undercut its reliability "probably would have [caused] a different result," on the newly-discovered-evidence claim. *See id.* at 510. Only then would a court need to address Wyldes's arguments about the weight of the *non-forensic* evidence from his 1987 trial. *Accord* D0129 (granting summary disposition on all claims that were not "based on recent scientific developments and advancements," which were all time-barred).

None of those arguments are compelling. Wyldes lied to investigators to conceal his connection to the suspected murder weapon. As soon as they disproved one lie, he supplied another. *See* D0409, Trial Tr. vol. 5, 696:18–710:11; D0408, Trial Tr. vol. 6, 713:14–727:3. Both Kanney and Easley saw

that same Marlin .22 rifle in Wyldes's possession, long after the shooting. *See* D0412, Trial Tr. vol. 2, 242:1–243:2 & 262:18–264:6; D0410, Trial Tr. vol. 4, 532:13–533:9. If believed, that proves Wyldes was lying in his *later* interviews when he said that he hadn't seen that rifle, "since the night [he] went in the ditch." *See* D0408, Trial Tr. vol. 6, 740:3–741:15. Wyldes had to lie about that Marlin .22 rifle, over and over again, because he *knew* that it was the actual murder weapon—because he was the killer.

Same goes for the shoes. Wyldes argues that he didn't really lie when he told investigators that he received those shoes after the date of the killing because he was confused about *which* Christmas was "last Christmas." *See* App's Br. at 47–48. But on cross-examination, Wyldes admitted that it was made clear from context that the investigator was specifically asking about whether he got the shoes *before* or *after* the date of the killing. *See* D0408, Trial Tr. vol. 6, 857:6–858:22; *accord id.* 710:12–712:16 (noting "[Wyldes] was very specific" that "[h]e did not have them at the time of the homicide"). Again: a lie that only the killer would believe they needed to tell.

Wyldes argues that Ruby didn't see him with a gun on the night that he went in the ditch. *See* App's Br. at 46. But Wyldes *admitted* that he had the Marlin .22 rifle with him. D0408, Trial Tr. vol. 6, 721:13–722:16. And of course she didn't positively identify Wyldes as the assailant—he wore a mask.

Ruby *could* see that he was "five-foot-two, thin built," with dark brown eyes. *See* D0413, Trial Tr. vol. 1, 41:10–44:7 & 49:7–53:5. That described Wyldes.

Wyldes said that Kanney stole the gun from him before the killing—and that he sat through interview after interview about that specific gun's connection to a murder without mentioning that fact. *See* D0408, Trial Tr. vol. 6, 859:4–864:4. If that were true, Wyldes could have just skipped all of the lies about the gun and just said *that*. The fact that he *didn't* is powerful evidence that it wasn't true—it was just another fabrication, woven out of necessity once investigators proved Wyldes *had* owned a .22 Marlin rifle in the days before the shooting (despite his best efforts). That fabrication, too, is significant evidence of guilt. *See State v. Ernst*, 954 N.W.2d 50, 56 (Iowa 2021) (quoting *State v. Cox*, 500 N.W.2d 23, 25 (Iowa 1993)).

Wyldes argues that he didn't give a false alibi and his whereabouts weren't unaccounted for, at the time of the killing. *See* App's Br. at 46–47. But *nobody* said he was with them at the time of the killing—not even the people he named as his alibi. Wyldes told investigators (and jurors) that he drove Kanney home that night, which *would* provide an alibi if it was true. But it wasn't. Easley drove Kanney home. Easley, Kanney, and Kanney's wife all remembered that happening. *See* D0412, Trial Tr. vol. 2, 237:4–238:4 & 224:9–233:2; D0410, Trial Tr. vol. 4, 530:10–531:5. Again—another lie. *See*

More, 880 N.W.2d at 510–11 (rejecting similar challenge even after finding forensic evidence offered at trial was unreliable/inadmissible, in part because "[More's] behavior generally and repeatedly points in the direction of guilt").

Kanney couldn't be the killer—he was six feet tall and had green eyes. D0410, Trial Tr. vol. 4, 514:9–12. And the 1979 killing that Wyldes cites has no known connection to this 1986 killing. *See* App's Br. at 39; D0490, at 3.

Wyldes attacks Kanney's credibility. *See* App's Br. at 43–45. He did so during his trial, too. But jurors had to have decided that they believed Kanney (and his wife, and Easley) over Wyldes, to reject Wyldes's claimed alibi and convict him. *See* D0408, Trial Tr. vol. 6, 814:13–815:6 & 854:2–23. They also had to have believed Kanney in order for any of the FATM same-source IDs to be relevant *at all*. If jurors didn't believe Kanney's testimony that Wyldes told him that he fired his Marlin .22 rifle on the gravel road, then it wouldn't matter whether those shots were fired from the same gun as the fatal shots. *See* D0410, Trial Tr. vol. 4, 519:2–520:14. And once they *did* believe Kanney over Wyldes, then Wyldes's denials that conflicted with Kanney's testimony (*before* Wyldes knew about Harvey's analysis) would become just as probative as any same-source ID—because Wyldes would only need to deny firing those shots on the gravel road if he *already knew* that they would match the shots that killed Starnes. *See* D0408, Trial Tr. vol. 6, 737:7–738:13; D0369, at 66.

Again, there is no reason to engage with arguments about re-weighing the non-forensic evidence from Wyldes's underlying trial, because he couldn't find newly discovered evidence that would meaningfully undercut or discredit the existing forensic evidence. But if he had, he would still be unable to show that any unreliable forensic evidence rendered his trial fundamentally unfair or that the verdict probably would have been different without it. All of that non-forensic evidence would still be supported by a *class*-match conclusion that shots from the scene and the gravel road were all fired by a Marlin .22, and *potentially* by the same one. *See* D0558, PCR Tr. vol. 2, 147:13–149:1. And it would still be supported by testimony that Wyldes's shoes could have left the footprints on the Starnes's door (since Wilcox's analysis in 2023 had reached the same conclusion as Tarasi's and Cayton's analyses in 1987). *See* D0562, PCR Tr. vol. 1, 103:19–22. All of Wyldes's lies (about his Marlin .22, his shoes, and his false alibi) would have the same probative value that they had in 1987. So would the facts that those lies were meant to conceal—they would still show that Wyldes was unaccounted for at the time of the killing, with a class-match rifle in his possession and class-match shoes on his feet. And he matched Ruby's description of the killer. This was a "combination of facts and circumstances that strongly point toward [his] guilt." *See More*, 880 N.W.2d at 511. So if Wyldes's challenges made it that far, they would still fail.

III. Wyldes failed to prove actual innocence.

Preservation of Error

The PCR court ruled on this actual-innocence claim. *See* D0551, at 1–2. That ruling preserved error.

Standard of Review

Review of a ruling on an actual-innocence claim is de novo. *See Dewberry v. State*, 941 N.W.2d 1, 4 (Iowa 2019).

Merits

Wyldes argues that he established his actual innocence, without explanation or citation to the record. *See* App's Br. at 65–66. He obviously did not. Even if the FATM same-source ID had been excluded and replaced with a class match—a finding that the same gun *could have* fired the shots at the scene and on the gravel road—that would not prove that Wyldes was "factually and actually innocent" of committing this killing. *See Dewberry*, 941 N.W.2d at 5. It wouldn't even undermine the sufficiency of the evidence to support a conviction, in the first instance. *See State v. Bass*, 349 N.W.2d 498, 501–02 (Iowa 1984) (rejecting sufficiency challenge on identity when evidence showed Bass had the opportunity to commit the murder, evinced "consciousness of guilt" through his subsequent actions, and "had access to a firearm of the nature used" in the killing). So this challenge is meritless.

IV. The PCR court did not err in granting summary disposition on Wyldes's time-barred claims.

Preservation of Error

The PCR court considered and rejected Wyldes's arguments that his claims were not time-barred. *See* D0095, Brief (2/8/22); D0129, at 15–29. That ruling preserved error.

Standard of Review

Rulings that grant summary disposition are reviewed for correction of errors at law. *See Moon v. State*, 911 N.W.2d 137, 142 (Iowa 2018).

Merits

These convictions are 37 years old. Any PCR claim is presumptively barred unless Wyldes pleads and proves it is based on a new ground of law or fact that could not have been discovered within the limitations period or during any of his prior PCR actions. *See* Iowa Code §§ 822.3, 822.8. Wyldes argues that he did that for some of the claims that the PCR court dismissed. He is incorrect.

A. Wyldes's *Brady* claim was time-barred. Wyldes did not show that it couldn't have been discovered earlier.

Wyldes says he didn't know about this claim until it was "discovered by current counsel [in] 2022." *See* App's Br. at 70. Wyldes does not explain *how* his counsel discovered the claim. In his motion to reconsider, he said: in 2020, "current PCR counsel investigated and learned from leading experts

in the field of ballistics that there were issues with Harvey's testimony." *See* D0132, Motion (5/4/22), at 5. Wyldes has never pled or proven any reason why he could not have conducted that investigation in the limitations period or during a prior PCR action. Moreover, the materials he cited in resistance to summary disposition that related to this claim were mostly in the public record during the 1980s. *See* D0095, at 10–11 & 18.

Wyldes asserts that *Brady* claims are not subject to section 822.3. *See* App's Br. at 70–71. Not true. Wyldes cites *Harrington*, which is clear on this. For each of the *Brady* claims in *Harrington*, the applicant had to prove that "they could not have been discovered earlier than they were discovered in the exercise of due diligence." *See Harrington v. State*, 659 N.W.2d 509, 521–23 (Iowa 2003). Wyldes failed to prove that here, and never could.

Wyldes's other argument is that it was "not clear" to the PCR court why he could not have discovered these facts earlier or during a prior PCR, so it should have denied summary disposition until it *was* clear. *See* App's Br. at 70–71. Incorrect. Summary disposition is "put up or shut up." Wyldes had to come forward with facts that proved his claim was not time-barred. *See Cornell v. State*, 529 N.W.2d 606, 610 (Iowa Ct. App. 1994); *Slaughter v. DMU Coll. of Osteopathic Med.*, 925 N.W.2d 793, 808 (Iowa 2019)). He didn't, because he couldn't. The PCR court was right to dismiss this claim.

B. Wyldes cannot evade that time bar by alleging that his prior PCR counsel was ineffective.

Wyldes argues that his third PCR action was promptly filed after procedendo on his second PCR action, and that he can use *Allison v. State* to raise his *Brady* claim if his prior PCR counsel was ineffective for failing to discover and raise it. *See* App's Br. at 71–74. The PCR court explained why would not work: *Allison* does not apply to third PCR actions, and this PCR action was "filed fourteen years after the conclusion of his first PCR." *See* D0129, at 22–26. Wyldes argues that the gap between his *second PCR* and his third PCR was only about 11 months. *See* App's Br. at 73–74 & n.5. But that does not help him, for three reasons. First, Wyldes is arguing that his *Brady* claim should "relate back" to his *first* PCR—the one that concluded 14 years before the PCR action in which he raised this claim. *See id*. Second, even if the "promptness" between his *second* and third PCR is what mattered, that 11-month gap would foreclose application of *Allison* anyway. *See, e.g.*, *Maddox v. State*, No. 19–1916, 2020 WL 5230367, at *2–3 (Iowa Ct. App. Sept. 2, 2020); *Harlston v. State*, No. 19–0267, 2020 WL 4200859, at *1 (Iowa Ct. App. July 22, 2020). And third, none of that changes the fact that *Allison* doesn't apply to third PCR actions. *See Taylor v. State*, No. 20–1388, 2022 WL 108470, at *2 & n.2 (Iowa Ct. App. Jan. 12, 2022).

Wyldes asserts that applying section 822.3 to bar claims would "violate [his] constitutional rights." *See* App's Br. at 60. Longstanding Iowa authority says otherwise. *E.g.*, *Davis v. State*, 443 N.W.2d 707, 709–11 (Iowa 1989).

C. The PCR court did not err in quashing discovery on Wyldes's time-barred claim about other killings.

After the PCR court granted summary disposition on all of the claims that weren't based on newly discovered forensic science, Wyldes subpoenaed investigative files for unrelated murder cases. The PCR court quashed them. *See* D0205, Order (12/7/22). It was right to do so. Wyldes could have done that discovery during any of his prior PCR actions. And those other murders had nothing to do with his claim about the PCAST report or forensic science. Wyldes says that "investigative reports from similar crimes" were "relevant to understanding the validity of the FATM and shoeprint comparisons" to prove his newly-discovered-evidence claim. *See* App's Br. at 75–76. But as the PCR court noted, "none of the requested evidence is new"—and all of it "would have been available to Wyldes in 1987." *See* D0205, at 5. And Wyldes "failed to articulate" how the broad swaths of documents that he subpoenaed were "relevant to or reasonably calculated to lead to . . . evidence germane to [his] claim of recent scientific developments and advancements in ballistics analysis and shoe print comparison." *See id.* Wyldes still has not articulated any such link. There is no error in the court's analysis, so his challenge fails.

CONCLUSION

The State respectfully requests this Court affirm the ruling that rejected each of Wyldes's claims.

REQUEST FOR NONORAL SUBMISSION

This case should be set for nonoral submission. In the event argument is scheduled, the State asks to be heard.

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

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