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IN THE SUPREME COURT OF THE STATE OF HAWAI'I

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DANIEL R. GRANILLO,
Petitioner/Petitioner-Appellant,

vs.

STATE OF HAWAI'I,
Respondent/Respondent-Appellee.

SCWC-22-0000740

CERTIORARI TO THE INTERMEDIATE COURT OF APPEALS
(CAAP-22-0000740; CASE NO. 2PR191000004)

JULY 15, 2026

DEVENS, C.J., MCKENNA, AND EDDINS, JJ.; WITH
GINOZA, J., CONCURRING SEPARATELY, AND WITH WHOM
CIRCUIT JUDGE KUBOTA, ASSIGNED BY REASON OF VACANCY, JOINS

OPINION OF THE COURT BY EDDINS, J.

The Hawai'i Constitution protects people from convictions based on false evidence. That protection does not fade with time. False evidence is false evidence. Time does not sideline the constitutional violation. The harm happens at conviction,

not discovery. And that harm is complete when materially false evidence contributes to conviction.

We hold that when scientific developments invalidate evidence presented at trial, the false evidence standard applies.

Here, the prosecution used hair and fiber evidence to convict a man. Because science has since proven that evidence false, his right to a fair trial was violated.

I.

In May 1989, Daniel Granillo (Granillo) allegedly kidnapped and sexually assaulted Laura Price (Price). (We use a pseudonym for the complainant.) Price said that Granillo grabbed her, forced her into his car, drove her to the Kahului breakwater, and sexually assaulted her. A second circuit grand jury indicted Granillo on one count of kidnapping, two counts of sexual assault in the first degree, and one count of attempted sexual assault in the first degree.

Trial was held in July 1990. Price testified. The prosecution presented circumstantial evidence to corroborate her account. To boost Price's credibility and further support its theory of the case, the State qualified Federal Bureau of Investigation (FBI) agent Wayne Oakes (Oakes) as an "expert witness in the area of hair and fiber analysis."

Oakes opined that a hair sample found in Granillo's car had the same microscopic characteristics as a sample taken from Price's head. He also stated that the hair was "consistent with" originating from Price. Oakes further testified that fiber samples found in Price's underwear and on her pants were "consistent with" coming from Granillo's car seat cover. He added that carpet fibers found on Price's pants were "consistent with" coming from the floor of Granillo's car. When asked by the prosecution on direct examination whether the samples showed "[Price] was in the car with her pants off and her panties exposed," Oakes answered affirmatively.

The defense highlighted inconsistencies in Price's narrative. However, it failed to present a focused theory of the case. Granillo did not testify and called no witnesses.

During closing argument, the prosecution acknowledged that the elements of the offenses were primarily established by Price's testimony. But the State stressed that it had more than just Price's word - it had physical evidence. The "uncontroverted physical evidence," the prosecution said, paired with Price's testimony, showed that Price was in the car with her pants on, then with her pants off, because Granillo undressed and sexually assaulted her.

The jury convicted Granillo as charged. The circuit court sentenced Granillo to forty years. It ran the sexual assault in

the first degree offense concurrently with the kidnapping offense (twenty years), and ran the other sexual assault in the first degree offense concurrently with the attempted sexual assault in the first degree offense (another twenty years). It then ran those two sets of concurrent counts consecutively, for a total of forty years.

The Intermediate Court of Appeals (ICA) affirmed Granillo's conviction. Granillo did not appeal the ICA's judgment.

In October 2017, nearly thirty years after Granillo's conviction, the County of Maui Department of the Prosecuting Attorney received a letter from the United States Department of Justice (DOJ). The letter explained that the FBI had determined that Agent Oakes' testimony - his expert opinion that the hair sample tested was consistent with originating from Price - was "inappropriate" because it overstated the statistical weight that can be assigned to microscopic hair comparisons. Oakes' testimony had "exceed[ed] the limits of the science."

The letter also related that the Innocence Project and the National Association of Criminal Defense Lawyers (NACDL) had found that Oakes' claim that he could microscopically differentiate between hairs from two different individuals was wrong because he "stated or implied that the evidentiary hair could be associated with a specific individual to the exclusion of all others." That statement also exceeded the science.

In February 2018, the State notified Granillo, then serving time in Arizona at Saguaro Correctional Center, of the letter. In January 2019, Granillo filed a Hawai'i Rules of Penal Procedure (HRPP) Rule 40 post-conviction relief petition.

The circuit court appointed counsel and held a non-evidentiary hearing.

At the hearing, the State conceded that the trial court improperly admitted Oakes' hair analysis testimony.

Granillo went further. He argued that the Rule 40 court should rule that the trial court improperly admitted not only the hair analysis testimony, but also Oakes' expert opinion on fiber. He explained that a 2009 congressional study conducted by the National Academy of Sciences (NAS) found that neither hair nor fiber analysis techniques can conclusively establish the exact source of a hair or a fiber. Thus, both Oakes' hair and fiber opinions exceeded the science.

The State responded that substantial evidence supported Granillo's conviction. It claimed that the DOJ, the Innocence Project, and NACDL analyzed transcripts in Granillo's case, but "did not find error with respect to the testimony of the fiber evidence[.]" And in light of the other compelling evidence, the State claimed, the error in admitting the hair evidence was harmless beyond a reasonable doubt.

The Rule 40 court concluded that Oakes' hair analysis testimony "was erroneously admitted because it exceeded the bounds of science." Based on compelling evidence of physical injury and other corroborative testimony, however, the court deemed the error harmless beyond a reasonable doubt.

The court did not rule on the admissibility of the fiber analysis. It denied Granillo's petition.

The ICA upheld the circuit court's denial of Granillo's HRPP Rule 40 petition, but for different reasons.

First, the ICA held that the lower court should have applied the McNulty test for newly discovered evidence instead of the harmless error standard. Per State v. McNulty, the ICA explained, new evidence warrants a new trial when "(1) the evidence has been discovered after trial; (2) such evidence could not have been discovered before or at trial through the exercise of due diligence; (3) the evidence is material to the issues and not cumulative or offered solely for purposes of impeachment; and (4) the evidence is of such a nature as would probably change the result of a later trial." 60 Haw. 259, 267-68, 588 P.2d 438, 445 (1978) (citation omitted).

The ICA held that Granillo satisfied the first two McNulty elements. The DOJ letter regarding Granillo's trial was "discovered" after trial and could not have been found before or at trial.

But the ICA held that Granillo failed to establish the third McNulty element - that the evidence was not cumulative. The ICA concluded that nothing in the DOJ letter or the record impeached Oakes' fiber opinion. Oakes' fiber opinion, the ICA said, showed that Price was in Granillo's car with her pants off, and that her underwear touched the car seat cover. The ICA therefore concluded that the hair evidence merely duplicated other evidence placing Price in Granillo's car.

Because it considered Oakes' fiber opinion cumulative of his hair opinion, the ICA declined to reach the fourth element, whether the evidence would "probably change the result of a later trial." See id. at 268, 588 P.2d at 445. It affirmed the circuit court's denial of Granillo's post-conviction petition.

The ICA applied the wrong standard. We hold that the false evidence standard governs this unique category of invalidated scientific evidence. The newly discovered evidence standard has no application in this context.

Newly-discredited scientific evidence is not "newly discovered evidence." It more closely resembles "false evidence." See Birano v. State, 143 Hawai'i 163, 181-82, 426 P.3d 387, 405-06 (2018); State v. Stone, 147 Hawai'i 255, 271-72, 465 P.3d 702, 718-19 (2020); United States v. Butler, 955 F.3d 1052, 1057 (D.C. Cir. 2020). If scientific advancements reveal the unreliability of forensic evidence used to convict, then the

evidence the jury heard was untrue - not new. We apply the false evidence standard to post-conviction proceedings challenging expert testimony that scientific developments later invalidate.

We take judicial notice of two landmark studies to the extent that they describe the limits of the microscopic analysis discipline.

This court may "take judicial notice . . . of the validity of underlying scientific principles and the reliability of scientific techniques." See State v. Vliet, 95 Hawai'i 94, 112, 19 P.3d 42, 60 (2001). This court may also take judicial notice of adjudicative facts if they are "capable of accurate and ready determination by resort to sources whose accuracy cannot reasonably be questioned." Hawai'i Rules of Evidence (HRE) Rule 201(b).

We take judicial notice of the National Research Council of the National Academies' (NRC) 2009 report to the extent it applies to microscopic hair and fiber analysis. Comm. on Identifying the Needs of the Forensic Sciences Cmty., Nat'l Rsch. Council, Strengthening Forensic Science in the United States: A Path Forward (The National Academies Press) (2009) (2009 NRC Report). We also take judicial notice of the President's Council of Advisors on Science & Technology's (PCAST) 2016 follow-up report to the extent it discusses the

limits of the microscopic comparison discipline, generally. President's Council of Advisors on Science & Tech., Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods (2016) (2016 PCAST Report).

These two studies demonstrate that (1) consensus regarding the scientific basis for and limits of microscopic comparison science has evolved over time, and (2) there are limits to what experts may assert regarding the statistical significance of findings using this science. Both facts are readily ascertainable. See HRE Rule 201(b).

The 2009 NRC Report and the 2016 PCAST Report support the DOJ's 2017 letter finding that Oakes' statements regarding the source of the hair in Granillo's case exceeded the science. These reports likewise establish that similar statistical assertions regarding the source of fibers found on Price's clothing exceeded the science underpinning microscopic analysis.

Based on these studies, we conclude that Oakes' fiber opinion was invalid. The evidence was false.

There is a reasonable possibility that the false fiber evidence contributed to Granillo's conviction. See Stone, 147 Hawai'i at 272, 465 P.3d at 719. "[I]t just takes one unconvinced juror to hang a jury. The reasonable possibility standard, then, is satisfied if there's a showing that it's reasonably possible that[] . . . a single juror would have voted

differently.” State v. Hirata, 152 Hawai‘i 27, 33, 520 P.3d 225, 231 (2022).

Oakes’ hair and fiber opinion powered the prosecution’s case. From opening to closing, the prosecution hammered the persuasive value and evidentiary import of the hair and fiber evidence. It served as the centerpiece of the State’s case. The defense exposed multiple inconsistencies in Price’s testimony and repeatedly challenged her account. Beyond some circumstantial corroboration of Price’s story, the conviction turned on her credibility. Thus, scientific evidence placing her in Granillo’s car bolstered that credibility.

The fiber evidence carried particular weight with the jury because Oakes’ fiber testimony did more than simply place Price in Granillo’s car. The hair evidence already placed Price in the car. But the fiber evidence, as FBI expert Oakes opined, went further. It reinforced the prosecution’s central theory that Price was in Granillo’s car with her pants on, then off, and that Granillo undressed and sexually assaulted her. That testimony alone would have erased any lingering juror doubts about her testimony.

Oakes’ testimony also projected scientific *certainty* that the hair found in Granillo’s car came from Price, and that the fibers found on Price’s clothing came from Granillo’s car. The State’s expert witness delivered his opinions as if they were

rooted in settled science. An expert opinion from a federal agent - one who has performed thousands of forensic tests - commands great evidentiary weight. See State v. David, 149 Hawai'i 469, 478, 494 P.3d 1202, 1211 (2021) (experts have an "aura of special reliability and trustworthiness").

We hold that there is a reasonable possibility that Oakes' expert opinions contributed to Granillo's conviction. His due process rights were violated. We remand for a new trial.

II.

A. Factual and Procedural Background

1. Trial Testimony

In the early morning hours on May 27, 1989, Granillo allegedly abducted Price from a shopping center parking lot, drove her to a nearby beach, and sexually assaulted her.

A second circuit grand jury indicted Granillo on one count of kidnapping, Hawai'i Revised Statutes (HRS) § 707-720(1)(d) (Supp. 1986); two counts of sexual assault in the first degree, HRS § 707-730(1)(a) (Supp. 1987); and one count of attempted sexual assault in the first degree, HRS §§ 705-500 (1985) and 707-730(1)(a).

Granillo's trial was held from July 9, 1990 through July 11, 1990. Price and other witnesses recounted the events as follows.

Before the incident, Price spent the evening drinking and dancing with her boyfriend, Floyd Kemfort, and friends. At some point, Price and Kemfort quarreled. They left together and drove her car to the Ah Fook's Shopping Center. Kemfort grabbed Price's car keys and abandoned her in the parking lot.

Price called her friend Robert Adams to pick her up. He called the police.

Granillo's friend Terry Tester, who was with Granillo in the shopping center parking lot, noticed Price crying for help and called the police.

The police arrived. The first officer to arrive, Glen Goto, testified that he responded to Tester's call regarding a woman crying for help. Another officer, Anthony Poplardo, testified that he also responded to a report of a female screaming in the shopping center parking lot.

Officer Goto testified that he observed Granillo and Tester together in the parking lot. As Goto spoke with Tester, Price lashed out at both men for calling the police. Officer Goto told the two men to leave and refocused his attention on Price. Price showed no visible signs of physical assault, Officer Goto said. Price refused further assistance and told police she planned to wait for a friend to come get her.

Following Price's outburst, Tester testified that he and Granillo left the parking lot in their separate cars.

After the police officers left to respond to another call, a car pulled up next to Price. According to Price, the man driving told her that "the police couldn't help [her] but that he could help [her]." Price said that the man got out of his car, hit her, forced her into his car, and drove off. He then held a knife to her neck and chest and threatened to kill her if she didn't stop crying.

Price described the man who grabbed her as having "kind of a husky build" and a "scar" on the left side of his face that "looked like almost a cleft lip or maybe a knife cut." At trial, Price pointed to Granillo sitting next to defense counsel and identified him as the man who sexually assaulted her. The record contains no evidence of any out-of-court identification by Price. No mugshot of Granillo, no photo array, no lineup. Price, it appears, identified Granillo for the first time at trial.

Price said Granillo took her to Kahului breakwater on Lower Beach Road. There, she testified, he parked the car, took out a knife, and said he wanted to "fuck" her. He "pulled his penis out and he shoved [Price's] face down between his legs." Without Price's consent, Granillo forced his penis into her mouth. She testified that Granillo then pulled down her pants, and put his hand inside of her vagina. Price testified that Granillo failed to penetrate her with his penis because he did

not have an erection, but he persisted in kissing and forcing himself against her. As she struggled and cried, Granillo told her to shut up, and "everytime [she] wouldn't shut up he would grab [her] hair and bang [her] head against the passenger window."

Price related that Granillo then threatened to penetrate her "from behind." She interpreted this as a threat to have anal sex with her. Out of fear, she put her pants on, unlocked the door, grabbed her purse, jumped out of the car, and hid. When Granillo could not find her, he drove away.

Price ran to the highway and flagged down a jeep. Price told the jeep's driver, Allen Auwae, that she had just been beaten up and raped. She asked to be driven back to her car at the shopping center. Upon their arrival, the police and Price's friend Adams were there. Auwae described Price as "hysterical," screaming, and crying on the drive. She said "something about the guy's face." Auwae also noticed that Price looked dirty with messy hair.

Officer Poplardo testified that he returned to the shopping center to find Price "really high strung," "excited," and "running around the parking lot." Price blamed the police. "She pointed at [Officer Poplardo] and said it was [his] fault or [the] police['s] fault that she got raped."

Price produced items from her purse and gave them to Officer Poplardo, believing they belonged to her assailant. She could not account for how a can of WD-40, white t-shirt, and empty peanut wrapper wound up in her purse. Price told Officer Poplardo that "she could identify the guy if she sees him again."

Around 4:00 a.m. Price arrived at Maui Memorial Hospital for an examination. Emergency room physician Dr. John Mills examined Price, performing both a general physical exam and a "somewhat detailed pelvic examination" to "look for any signs of trauma, [infection, or intercourse]." Price told Dr. Mills that "she had been forced to perform vaginal intercourse." She "denied any fellatio or any sodomy."

Days after the incident, friends visited Price. They testified that they saw bruising on Price's face, left thigh, and right arm.

During the investigation, police recovered evidence from Price, Granillo, and Granillo's car. Maui Police Department officer Lucille Briel testified that she recovered a tank top, underwear, pants, and pubic hair from Price. Maui Police Department Detective Charles Rojas testified that he recovered two knives, strands of hair, and debris from Granillo's car. He also recovered body hairs from Granillo.

Then Maui Police Department Detective Ivan Takitani testified that he sent hair samples collected from Price, and fiber samples taken from Granillo's car seat covers and floor carpet to the FBI for analysis and examination.

2. Oakes' Expert Testimony

The State called FBI agent Wayne Oakes to testify as an expert witness in hair and fiber analysis. Oakes testified that he was a "supervisory special agent with the FBI" and had served with the bureau for approximately twelve-and-a-half years. For nine-and-a-half of those years, he worked in the FBI's hair and fiber division, where he examined hair and fiber samples submitted by local, state, and other federal law enforcement agencies. Oakes related that he had conducted around two to three thousand hair sample analyses.

Based on his examination of the hair samples in this case, Oakes testified that (1) the hair sample found in Granillo's vehicle had been "forcibly removed" because it was broken at the root end; (2) the two hair samples, one from Granillo's car and the other from Price's head, had the same microscopic characteristics; and (3) the hair sample from Granillo's car was consistent with originating from Price.

Oakes also testified that he could distinguish one person's hair from another's through microscopic comparison alone. He told the jury, "I would be able to differentiate that person's

hair from Mr. Kim's [the deputy prosecuting attorney] hair by looking at the microscopic characteristics."

As for his fiber analysis, Oakes testified that (1) the fibers found on Price's underwear were "consistent with coming from [the seat cover of Granillo's vehicle]," (2) the marine acrylic fibers found on Price's pants were "consistent with coming from the seat cover of [Granillo's] vehicle," and (3) "the carpet fibers . . . from [Price's] pants were consistent with coming from the floor of [Granillo's] vehicle." All sets of compared fibers, Oakes testified, were "microscopically the same."

Granillo did not present any witnesses, nor did he testify.

3. Closing Arguments and Verdict

During closing argument, the prosecution recapped Price's "uncontroverted" testimony regarding the kidnapping and assault. Counsel highlighted that Detective Takitani found Price's belongings at the alleged scene, corroborating her testimony that she had been kidnapped to that area. The prosecution parried purported inconsistencies in Price's testimony regarding whether the car was moving when she escaped. He explained that the car likely rolled on a slight incline because it was a "stick shift." The prosecution further argued that the alleged physical force used by Granillo was corroborated by Price's friends, who saw her bruises after the incident.

The prosecution then countered anticipated attacks on Price's credibility with the weight of the forensic evidence against Granillo. "We have physical evidence," the State said. "Physical evidence shows that [Price] was in the car from the FBI agent who testified this morning."

The prosecutor explained to the jury that (1) the carpet samples "matched," (2) the hair found by Detective Rojas "matched the hair of [Price]," and (3) that Oakes could tell the hair was forcibly removed by physically examining it. Counsel also argued that the green fibers from Granillo's car were found in Price's pants and underwear, and that "each one of these fibers are identical to each other. They were found to have matched the seat cover of the driver's seat of [Granillo's] car." Thus, the prosecution claimed, the physical evidence, paired with Price's testimony, showed that (1) she was abducted, (2) she was in the car with her pants on, then off, and (3) that the person who undressed Price was Granillo.

The defense's closing argument focused on inconsistencies in Price's testimony. For instance, why was only one strand of hair found if her head was allegedly slammed against the window over twenty times? How did items like a WD-40 can end up in Price's purse if she was so frightened during the kidnapping and assault? And why did Dr. Mills not see bruises on Price's

thighs when he examined her after the incident? The defense, though, did not attempt to undermine Oakes' testimony.

In rebuttal, the prosecution countered the defense's arguments regarding inconsistencies in Price's testimony. It explained that Price testified well after the investigation. She had moved back to California and tried to put the incident "out of her mind." Other testimony established that Granillo had motive and opportunity to "take advantage" of Price, who was crying, screaming, and had already refused help from the police. Thus, the State concluded, it had proved all elements of each charge beyond a reasonable doubt.

The jury found Granillo guilty as charged of all four counts: kidnapping, HRS § 707-720(1)(d); two counts of sexual assault in the first degree, HRS § 707-730(1)(a); and attempted sexual assault in the first degree, HRS §§ 705-500 and 707-730(1)(a).

4. Post-Conviction Proceedings

Nearly thirty years after Granillo's conviction, on October 2, 2017, the Maui prosecutors received a letter from the Department of Justice. The DOJ letter explained that the FBI had determined that Agent Oakes' expert testimony - opining that the hair sample was consistent with originating from Price - was "inappropriate" because it overstated the statistical weight that can be assigned to microscopic hair association. The

letter also referenced the Innocence Project and NACDL's finding that Agent Oakes' testimony that he could differentiate a person's hair from that of the prosecutor in this case was erroneous.

The State notified Granillo of the letter. At the time, he was incarcerated in Arizona. A year later, Granillo filed a HRPP Rule 40 petition.

On January 24, 2019, Granillo filed a Rule 40 petition. Relevant to this appeal, Granillo argued that the trial court erred in admitting Oakes' opinion testimony because (1) the State did not lay a sufficient foundation regarding the testing methods and instruments used for the hair and fiber analysis, and (2) the DOJ letter proves that Oakes' evidence was erroneous because his opinion "went beyond the bounds of science."

The circuit court held a non-evidentiary hearing on Granillo's Rule 40 petition. At the hearing, Granillo asked the court to take judicial notice of the 2009 NRC Report. He argued that "there was a study by the National Academy of Sciences . . . that showed that hair and fiber evidence . . . cannot conclusively match. At most, it can say it could have come from there, it could have come from anywhere else." Thus, he argued, the fiber evidence should also have been deemed inadmissible.

The State did not respond to this argument regarding the 2009 NRC Report. (Later, before the ICA, the State only argued that the DOJ *letter* "did not render the fiber analysis inadmissible.")

The circuit court denied Granillo's petition.

The court concluded that Oakes' hair analysis testimony "was erroneously admitted because it exceeded the bounds of science." But that error, the court concluded, was harmless beyond a reasonable doubt. It held there was "overwhelming and compelling evidence of physical injury, along with other corroborative testimony, that demonstrate[d] the defendant's guilt beyond a reasonable doubt despite the erroneously-admitted evidence." See State v. Veikoso, 126 Hawai'i 267, 276, 280, 270 P.3d 997, 1006, 1010 (2011) (improperly admitted evidence requires a new trial unless it is harmless beyond a reasonable doubt).

The court did not rule on the admissibility of Oakes' fiber opinion.

The court denied Granillo's Rule 40 petition.

5. Appellate Proceedings

The ICA affirmed. It held that that the Rule 40 court should have applied the McNulty newly discovered evidence test instead of the harmless error standard. Even so, the ICA

concluded that Granillo would not have satisfied the McNulty test. The circuit court had properly denied the petition.

First, because Granillo's petition was based on newly discovered evidence, the ICA determined that the circuit court should have applied the McNulty test. The McNulty test, the ICA explained, is used to determine whether new evidence warrants a new trial:

(1) the evidence has been discovered after trial; (2) such evidence could not have been discovered before or at trial through the exercise of due diligence; (3) the evidence is material to the issues and not cumulative or offered solely for purposes of impeachment; and (4) the evidence is of such a nature as would probably change the result of a later trial.

See Haw. Police Dep't, Cnty. of Haw. v. Kubota, 155 Hawai'i 136, 145, 557 P.3d 865, 874 (2024).

Second, the ICA determined that Granillo did not meet McNulty's test. The ICA reasoned that Granillo satisfied the first two elements. However, he failed to show that the evidence was not cumulative. As the DOJ letter established, Oakes' opinion on the hair evidence was "invalid." The ICA also determined that the evidence could not have been discovered at trial because, as the circuit court concluded, "[the DOJ's] determination was made decades after the trial and subsequent appeal."

As for part three of the McNulty test, the ICA held that while the new evidence was material to whether Price had been in

Granillo's car, Oakes' hair analysis testimony was cumulative of his fiber opinions. Granillo, the ICA said, misrepresented the DOJ letter when he referred to "bogus and inadmissible hair *and fiber* evidence[.]" The ICA concluded that nothing in the DOJ letter or the record impeached Oakes' fiber opinion, which in the ICA's view, showed that Price was in Granillo's car with her pants off and her underwear touching the car seat cover. The discredited hair evidence was cumulative of the purportedly valid fiber evidence. The new evidence failed to satisfy the third part of the McNulty test, the ICA ruled. And thus, the ICA held, it was unnecessary to address the fourth part of the test. It never reached whether the evidence would probably change the result of a later trial.

Granillo appealed. We accepted cert on Granillo's first point of error challenging the admissibility of Oakes' fiber opinion.

Ahead of oral argument, we ordered supplemental briefing as to (1) whether this court should take judicial notice of the 2009 NRC Report, (2) "the impact of erroneously admitted scientific evidence on the right to a fair trial in this case," and (3) "the appropriate standard for reviewing post-conviction claims that evidence presented at trial has been scientifically discredited."

III.

A. Judicial Notice of the 2009 NRC Report and the 2016 PCAST Report

For decades, FBI agents testified that microscopic hair and fiber analysis could match samples to specific sources. Courts admitted the evidence. Juries relied on it. Convictions followed.

The evidence was false.

The 2009 National Research Council Report and 2016 President's Council of Advisors on Science and Technology Report exposed forensic techniques that the scientific community had never validated. Microscopic hair and fiber comparison cannot isolate a sample's source. These methods provide only class evidence, and lack an empirical basis.

Congress commissioned the NRC Report in 2006. The National Academy of Sciences assembled a committee of leading scientists, legal practitioners, and scholars. They heard hundreds of hours of testimony and conducted years of independent research.

The 2009 NRC Report dismantled forensic science that courts had trusted for generations. Courts had routinely admitted unscientific evidence and prosecutors used that evidence to convict. Turns out, microscopic hair and fiber comparison and other pattern-matching techniques were unsound.

The "evidence" was never evidence.

Seven years later, the PCAST Report confirmed the systemic failures in forensic practices identified by the NRC Report. Expert testimony accepted in courtrooms across the nation had lacked scientific validity. Testimony like federal agent Oakes' on Maui exceeded the limits of science. Science doesn't lie. Or so jurors were led to believe.

We take judicial notice of the 2009 NRC Report and the 2016 PCAST Report, but only as to their findings on the scientific limitations of hair and fiber comparison and expert testimony based on feature-comparison methods. Both reports establish what microscopic hair and fiber comparison can and cannot prove. We notice only the reports' findings on these specific forensic techniques.

1. The Judicial Notice Standard

Taking judicial notice of scientific principles and techniques is nothing new for this court. See Vliet, 95 Hawai'i at 112, 19 P.3d at 60 ("[O]ur appellate courts have 'not hesitated in the past to take judicial notice [on appeal] of the validity of underlying scientific principles and the reliability of scientific techniques.'" (quoting State v. Ito, 90 Hawai'i 225, 243, 978 P.2d 191, 209 (App. 1999))). Courts "may consider persuasive authorities and[] . . . case law from other jurisdictions to determine the reliability of a particular scientific test." Id. (citations omitted).

Vliet took judicial notice of Widmark's formula, accepted by the United States National Highway Traffic Safety Administration as "the basic formula for estimating a person's blood alcohol concentration." Id. at 112-13, 19 P.3d at 60-61 (citing United States Department of Transportation, National Highway Traffic Safety Administration, Office of Program Development and Evaluation, Computing a BAC Estimate, at 2-3 (1994)). Montalbo took the same approach, judicially noticing "that the DNA paradigm is not controversial and is widely accepted in the relevant scientific community." State v. Montalbo, 73 Haw. 130, 141, 828 P.2d 1274, 1281 (1992).

Then there's Fukusaku. In 1997, this court observed that "scientific principles and procedures underlying hair and fiber evidence are well-established and of proven reliability." State v. Fukusaku, 85 Hawai'i 462, 474, 946 P.2d 32, 44 (1997); see Ito, 90 Hawai'i at 236, 978 P.2d at 202 ("[Fukusaku] essentially took judicial notice of the reliability of the underlying scientific principles and the methodology employed in hair and fiber analysis").

Fukusaku reflected the scientific consensus of its era. That consensus no longer holds. The 2009 NRC Report and 2016 PCAST Reports revealed what Fukusaku could not have known. Hair and fiber comparison methods lacked scientific validity. These authoritative findings compel us to reverse course.

Hawai'i Rules of Evidence Rule 201 permits judicial notice of adjudicative facts that are "capable of accurate and ready determination by resort to sources whose accuracy cannot reasonably be questioned." HRE Rule 201(b). Judicial notice is discretionary. HRE Rule 201(c). Courts may take judicial notice at any time. HRE Rule 201(f). Further, "an appellate court may take judicial notice of facts despite the failure of the trial court to do so, provided that the facts are 'capable of immediate and accurate demonstration by resort to easily accessible sources of indisputable accuracy.'" State v. Puaoi, 78 Hawai'i 185, 190, 891 P.2d 272, 277 (1995) (citation omitted).

This court has also taken judicial notice of governmental reports under this rule. See Off. of Hawaiian Affs. v. State, 96 Hawai'i 388, 396 n.13, 31 P.3d 901, 909 n.13 (2001) (noticing a Federal Aviation Administration letter and "other relevant federal memoranda, regulations, and legislation").

Judicial notice here serves a specific purpose. We notice not the validity and reliability of microscopic comparison methods themselves, but rather two adjudicative facts that the NRC and PCAST Reports establish: (1) scientific consensus about the basis and limits of microscopic comparison techniques has decisively changed over time, and (2) science imposes definite constraints on the permissible scope of expert testimony concerning microscopic hair and fiber analysis.

HRE Rule 201(b) allows judicial notice of facts readily determinable from unquestionably accurate sources. The 2009 NRC Report and the 2016 PCAST Report qualify. Both are government-commissioned, authoritative studies by the nation's leading scientific institutions.

The NRC and PCAST Reports define microscopic hair and fiber analysis's capabilities and the limits of expert testimony based on such analysis. We hold that judicial notice of these reports is appropriate to assess whether Oakes' hair and fiber opinions exceeded scientific limits.

We begin with the 2009 NRC Report's findings.

2. The 2009 NRC Report

In 2006, Congress passed the Science, State, Justice, Commerce, and Related Agencies Appropriations Act. This "unprecedented congressional charge" required the National Academy of Sciences to "conduct a comprehensive examination of the entire field of forensic science across all disciplines." Jennifer E. Laurin, Remapping the Path Forward: Toward a Systemic View of Forensic Science Reform and Oversight, 91 Tex. L. Rev. 1051, 1058 (2013) (citing H.R. Rep. No. 109-272, at 121 (2005) (Conf. Rep.)).

The NAS formed a sixteen-member committee of leading research scientists, forensic scientists, legal practitioners, and legal academics. 2009 NRC Report, supra, at 287-99. The

commission was co-chaired by Judge Harry Edwards, former chief judge of the District of Columbia Circuit Court of Appeals. Id. at 287-88.

The committee "heard hundreds of hours of testimony from stakeholders in the field – practicing forensic scientists, social scientists, academics, prosecutors and defense attorneys, and federal, state, and local law enforcement officials – and 'engaged in independent research.'" Laurin, supra, at 1067 (footnotes omitted).

The report responded "to growing concerns from the legal system and the public regarding the effectiveness and scientific foundation of the forensic disciplines being applied by law enforcement agencies and crime laboratories." Sharon L. Plotkin & Jan S. Kelly, *Chapter 1: Crime Scene Investigations Response to the NAS Report of 2009*, in Methodological and Technological Advances in Death Investigations: Application and Case Studies 13, 14 (Ross, A.H., & Byrd J.H. eds. 2023). Its findings "largely confirm[ed] the most pessimistic accounts of the forensic sciences that ha[d] been circulating in academic and, to some extent, professional quarters." Laurin, supra, at 1067. "Techniques long relied on by law enforcement and accepted by courts – pattern identification analysis ranging from fingerprints to shoe prints to ballistics, hair and fiber analysis, and questioned document analysis, among other

disciplines - [were] called out as never having been systematically and scientifically validated." Id. (emphases added).

The NRC Report unraveled forensic science techniques that courts and juries had trusted for decades to determine guilt or innocence. See id.

The NRC Report's hair analysis findings are unequivocal. The report found that "[t]he results of analyses from hair comparisons typically are accepted as class associations; that is, a conclusion of a 'match' means only that the hair could have come from any person whose hair exhibited - within some levels of measurement uncertainties - the same microscopic characteristics, but it cannot uniquely identify one person." 2009 NRC Report, supra, at 156 (emphasis added). This information is mostly useful to "'narrow the pool' by excluding certain persons as sources of the hair." Id.

The report revealed there is no standardized number of similar features an examiner must find to call a "match." Id. at 160. Further, because there was "no scientific support for the use of hair comparisons for individualization in the absence of nuclear DNA," these microscopic comparisons alone are "of limited probative value." Id. at 161. Microscopic comparison of physical features today is mostly used to exclude suspects

and decide whether hairs are similar enough to pursue DNA testing. Id. at 160.

The same limitations apply to microscopic fiber analysis. The 2009 NRC Report found that "[f]ibers associated with a crime – including synthetic fibers such as nylon, polyester and acrylic as well as botanical fibers such as ramie or jute, which are common in ropes or twines – can be examined microscopically in the same way as hairs, and with the same limitations." Id. at 161 (emphasis added). Where there are "relatively distinctive environmental conditions (e.g., sunlight exposure or laundering agents)," analysis can "distinguish particular items from others from the same manufacturing lot." Id. "Fiber examiners agree, however, that none of these characteristics is suitable for individualizing fibers (associating a fiber from a crime scene with one, and only one, source) and that fiber evidence can be used only to associate a given fiber with a class of fibers." Id. (emphasis added). Thus, "[i]t can never be stated with certainty that a fiber originated from a particular textile because other textiles are produced using the same fiber types and color." Id. at 161-62 n.90 (citing U.S. Department of Justice Federal Bureau of Investigation, Scientific Working Group on Materials Analysis, Introduction to Forensic Fiber Examination, 1 Forensic Science Communications, Section 5.4 (1999), available at

<https://www.ojp.gov/pdffiles1/218830.pdf> [<https://perma.cc/TS4P-BM2M>].

The report also explained that, like hair analysis, there are “no set standards[] for the number and quality of characteristics that must correspond in order to conclude that two fibers came from the same manufacturing batch.” Id. at 162-63. There haven’t been any studies on fibers to make this assessment regarding same manufacturing source. Id. “Similarly,” the study related, there have been no studies exploring “whether environmentally related changes discerned in particular fibers are distinctive enough to reliably individualize their source, and there have been no studies that characterize either reliability or error rates in the procedures.” Id. at 163. “Thus, a ‘match’ means only that the fibers could have come from the same type of garment, carpet, or furniture; it can provide only class evidence.” Id.

The committee ultimately concluded that many of the feature-comparison disciplines, like hair and fiber analysis, “lacked well-defined systems for determining error rates and had not done studies to establish the uniqueness or relative rarity or commonality of the particular marks or features examined.” 2016 PCAST Report, supra, at 4 (describing the 2009 NRC Report), 20. “Much forensic evidence – including, for example, bite marks and firearm and toolmark identifications – is introduced

in criminal trials without any meaningful scientific validation, determination of error rates, or reliability testing to explain the limits of the discipline." 2009 NRC Report, supra, at 107-08 (footnotes omitted).

For sure, we do not take judicial notice of every scientific study raised in post-conviction cases. The 2009 NRC Report is different though. It transformed forensic science practice, prompted nationwide conviction reviews (like here), forced the FBI to abandon techniques and revise practices, and reset judicial standards for evaluating forensic testimony.

Courts now treat the report as the authoritative reference for evaluating forensic methods previously accepted without question. See, e.g., More v. State, 880 N.W.2d 487, 509 (Iowa 2016) ("[T]he 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 . . . with new statistical data previously unavailable to scientists. . . . While each marginal advance in science cannot form the basis of a new trial, watershed developments are a different story."); State v. Brackett, No. WAS-24-231, 2026 WL 304999, *13 (Me. Feb. 5, 2026); Paul C. Giannelli, The NRC Report and its Implications for Criminal Litigation, 50 *Jurimetrics J.* 53 (2009) (describing the report's "profound impact on crime laboratories and the judicial system"); Plotkin & Kelly, supra, at 16 ("The impact of

the 2009 NAS Report has and will continue to be far-reaching."); Laurin, supra, at 1054-55 ("The NAS Report has been widely heralded as a watershed, and its analysis and recommendations look to be setting the terms of academic and policy debates concerning forensic science for the foreseeable future.").

We take judicial notice of the 2009 NRC Report's conclusions regarding microscopic hair and fiber comparison, including those disciplines' basis and scientific limitations, and the permissible scope of expert testimony on such evidence.

3. 2016 PCAST Report

The President's Council of Advisors on Science and Technology's 2016 report affirmed the NRC Report's conclusions on the limits of microscopic hair and fiber comparison techniques. See 2016 PCAST Report, supra, at 54-55, 44-66, 120-21, 136-39.

We take judicial notice of the PCAST Report's requirements for scientifically valid expert testimony on feature-comparison methods. 2016 PCAST Report, supra, at 54-55. We also take judicial notice of the 2016 PCAST Report to the extent it evaluates microscopic hair comparison uniform expert guidelines relied on by the Department of Justice. Id. at 139-40.

What PCAST discovered was unconscionable. Seven years after the NRC Report exposed false expert testimony about microscopic comparison techniques, federal experts were still

doing it. The 2016 PCAST Report concluded that federal government experts continued to untruthfully testify about the probability that a sample came from a specific source:

Troublingly, expert witnesses sometimes go beyond the empirical evidence about the frequency of features – even to the extent of claiming or implying that a sample came from a specific source with near-certainty or even absolute certainty, despite having no scientific basis for such opinions. From the standpoint of scientific validity, experts should never be permitted to state or imply in court that they can draw conclusions with certainty or near-certainty (such as “zero,” “vanishingly small,” “essentially zero,” “negligible,” “minimal,” or “microscopic” error rates; “100 percent certainty” or “to a reasonable degree of scientific certainty;” or identification “to the exclusion of all other sources[]].”

See 2016 PCAST Report, supra, at 54 (emphases added) (footnote omitted).

The report demolished a familiar refuge for unreliable expert testimony – the appeal to experience. Doing something for a long time does not make it scientifically valid.

“‘[E]xperience’ or ‘judgment’ cannot be used to establish the scientific validity and reliability of a metrological method, such as a forensic feature-comparison method. The frequency with which a particular pattern or set of features will be observed in different samples, which is an essential element in drawing conclusions, is not a matter of ‘judgment.’” Id. at 55.

The council did not undertake a full review of hair or fiber comparison. Id. at 118. But it did probe the DOJ’s July 2016 Proposed Uniform Language for Testimony and Reports for the Forensic Hair Examination Discipline and supporting

documentation. Id. at 118, 136, 139. PCAST found that "[t]he guidelines appropriately state that examiners may not claim that they can individualize the source of a hair nor that they have a zero error rate." Id. at 139.

PCAST noted that the DOJ guidelines properly permitted examiners to "state or imply that the questioned human hair is microscopically consistent with the known hair sample and accordingly, the source of the known hair sample can be included as a possible source of the questioned hair." Id. (quoting Proposed Uniform Language for Testimony and Reports for the Forensic Hair Examination Discipline, supra, at 2). But PCAST imposed a critical limitation to those types of statements. PCAST explained that examiners are "barred from providing accurate information about the reliability of such conclusions." Id. (emphasis added). PCAST condemned such reliability testimony as "contrary to the scientific requirement that forensic feature-comparison methods must be supported by and accompanied by appropriate empirical estimates of reliability." Id. (emphasis added).

The PCAST Report also found that the studies cited by the DOJ in its supporting documentation "do not provide a scientific basis for concluding that microscopic hair examination is a valid and reliable process":

According to the [DOJ] supporting document, it is not an "error" but simply a "limitation of the science" when an

examiner associates a hair with an individual who was not actually the source of the hair. This is disingenuous. When an expert witness tells a jury that a hair found at the scene of a crime is microscopically indistinguishable from a defendant's hair, the expert and the prosecution intend the statement to carry weight. Yet, the document goes on to say that no information is available about the proportion of individuals with similar characteristics. As Chapter 4 makes clear, this is scientifically unacceptable. Without appropriate estimates of accuracy, an examiner's statement that two samples are similar – or even indistinguishable – is scientifically meaningless: it has no probative value, and considerable potential for prejudicial impact.

Id. at 120-21 (emphases added).

In other words, experts may not opine on the accuracy of microscopic hair comparisons to imply that two samples are from the same source. See id. "In short," PCAST concluded, "if scientific hair analysis is to *mean* something, there must be actual *empirical evidence* about its meaning." Id. at 121.

We take judicial notice of the PCAST Report's analysis of DOJ microscopic hair comparison methods. PCAST confirmed what the NRC had concluded – without empirical validation, claims that samples are similar or match lack scientific basis. See id. at 120-21. We also take judicial notice of PCAST's analysis addressing the limits associated with expert testimony on feature-comparison methods. Id. at 54-55.

4. The DOJ Letter's Focus on Hair Does Not Dictate Our Analysis

The DOJ letter reviewed Oakes' hair testimony. The State relies heavily on that limited focus. The ICA agreed, concluding that because the DOJ letter did not discuss fiber

analysis, the unreliable fiber evidence escapes scrutiny. We reject that logic.

The DOJ's decision not to review Oakes' fiber testimony says nothing about its reliability. Silence is not endorsement.

The federal agency review sprung from DNA exonerations that revealed errors in microscopic hair analysis. Hair drove the effort. Fiber was never part of it.

Microscopic hair analysis was the "second most common type of flawed forensic evidence" identified in DNA exonerations. Vanessa Meterko, Strengths and Limitations of Forensic Science: What DNA Exonerations Have Taught Us and Where to Go From Here 119 W. Va. L. Rev. 639, 642 (2016). After exonerations involving flawed FBI hair examiner testimony came to light, the FBI, DOJ, NACDL, and the Innocence Project launched an "unprecedented collaboration" to independently review "thousands of cases in which the FBI conducted microscopic hair analysis of crime scene evidence." Norman L. Reimer, Microscopic Hair Comparison Analysis Review Project: A Milestone in the Quest for Forensic Science, NACDL, <https://www.nacdl.org/Article/May2015-TheMicroscopicHairComparisonAn> [<https://perma.cc/A5GJ-YGPS>]; Meterko, supra, at 642-43 (citing FBI Testimony on Microscopic Hair Analysis Contained Errors in at Least 90 Percent of Cases in Ongoing Review, Fed. Bureau of Investigation (Apr. 20, 2015), <https://www.fbi.gov/news/press-releases/fbi-testimony-on->

microscopic-hair-analysis-contained-errors-in-at-least-90-percent-of-cases-in-ongoing-review [<https://perma.cc/DDM6-U9UB>]). The 2009 NRC Report inspired that review. Meterko, supra, at 640-41; Reimer, supra. And that review generated the letter flagging Oakes' misstatements in his hair analysis testimony.

The review's scope was limited to microscopic hair analysis. That's not because fiber science is reliable. Hair exonerations prompted the review. Only ten DNA exoneration cases nationwide "involved incorrect testimony about 'other' less-common disciplines like shoe print and fiber analysis." Meterko, supra, at 643.

Nor is the DOJ's omission a quarrel with the NRC report. The NRC Report is explicit. Fibers "can be examined microscopically in the same way as hairs, and with the same limitations." 2009 NRC Report, supra, at 161. We analyze Oakes' fiber testimony based on those limitations.

B. Oakes' Fiber Opinions Exceeded the Science

The circuit court and the ICA correctly ruled that Oakes' hair comparison testimony exceeded scientific limits. But the ICA erred in ruling that Oakes' fiber opinions were admissible. His fiber testimony equally exceeded the science.

The 2009 NRC Report and 2016 PCAST Report establish clear boundaries for what microscopic fiber analysis can and cannot

support. Oakes' testimony exceeded the limits of science in many ways.

1. Oakes' Fiber Testimony

We first recap Oakes' fiber analysis testimony. The FBI agent's expert opinion involved three fiber comparisons and a climactic statement that purported to corroborate the prosecution's theory of the case.

Oakes told the jury that "green acrylic textile fibers" found on Price's underwear were "microscopically identical" to a seat sample from Granillo's car. He said these "fibers" were "consistent with coming from that item." (Emphasis added.) Then Oakes opined that "marine acrylic fibers" found on Price's pants were "consistent with coming from the seat cover of [Granillo's] vehicle." (Emphasis added.) As for the "brown and grey carpet fibers" found on Price's pants, they were "microscopically the same" as carpet fibers from the "front left floor portion of [Granillo's] vehicle," Oakes testified.

The prosecution linked the evidence to its theory of the case. It ended Oakes' direct examination by asking whether his fiber findings were "consistent with the allegation that [Price] was in the car with her pants off and panties exposed[.]" Oakes answered, "Yes. The fact that I found seat cover fibers in the debris from the victim's panties would be consistent with that, yes." Oakes offered no qualifying statements.

On cross-examination, the defense questioned Oakes about the number of fiber samples collected, and where in the car they were found. Little else. At the time, no one had reason to question the FBI's methodology.

Oakes told the jury that the fibers were "microscopically identical," "microscopically the same," and "consistent with" coming from Granillo's car.

These are precisely the types of overstatements the DOJ deemed inappropriate. Yet the DOJ's letter to Granillo reached only Oakes' hair opinion.

The 2017 DOJ letter provides the framework for analyzing Oakes' testimony. While the letter addressed hair analysis, its conclusions apply equally to fiber analysis. The NRC Report says so. Fiber analysis has "the same limitations" as hair analysis. 2009 NRC Report, supra, at 161.

The DOJ determined that Oakes' hair testimony was "inappropriate" because it overstated the statistical weight that can be assigned to a positive microscopic hair association. Oakes misstated the science when he testified that the hair found in Granillo's car was "consistent with originating from [Price]." The DOJ concluded that Oakes had misled the jury by "assign[ing] to the positive association a statistical weight or probability . . . that the questioned hair originated from a particular source, or an opinion as to the likelihood or

rareness of the positive association that could lead the jury to believe that valid statistical weight can be assigned to a microscopic hair association."

The DOJ declared, "This type of testimony exceeds the limits of the science."

2. Oakes' Fiber Testimony Exceeded Scientific Limits

We now look at how Oakes' fiber testimony exceeded science's limits. The testimony defied scientific principles in five respects: it improperly individualized the evidence, assigned unwarranted statistical weight, concealed the limitation to class evidence, ignored the absence of validation studies, and failed to acknowledge that no unique environmental characteristics distinguished these fibers.

First, Oakes identified a specific source, when the science permits only class identification. The 2009 NRC Report could not be clearer. "Fiber examiners, agree, however, that none of these characteristics is suitable for individualizing fibers (associating a fiber from a crime scene with one, and only one, source) and that fiber evidence can be used only to associate a given fiber with a class of fibers." 2009 NRC Report, *supra*, at 161 (emphasis added). The FBI's Scientific Working Group on Material Analysis acknowledges, "[i]t can never be stated with certainty that a fiber originated from a particular textile because other textiles are produced using the same fiber types

and color." Id. at 161-62 n.90 (citing Scientific Working Group on Materials Analysis, supra) (emphasis added).

Here's what Oakes testified. The "green acrylic textile fibers" found on Price's underwear were "microscopically identical" to a seat sample from Granillo's car, and were "consistent with coming from that item" (the seat cover in Granillo's car). (Emphasis added.) He also identified "marine acrylic fibers" found on Price's pants as "consistent with coming from the seat cover of [Granillo's] vehicle." (Emphasis added.) And he opined that the carpet fibers from Price's pants were "microscopically the same" as those from the "front left floor portion of [Granillo's] vehicle."

By using language like "that item," "the seat cover" and "the front left floor portion," Oakes identified specific sources - not a class of fibers. He told the jury the fibers came from Granillo's car, not from a type of seat cover or carpet, or a class of marine acrylic fibers used in automotive seat covers. This was not class association. It was source attribution. It had no scientific basis.

Second, Oakes assigned improper statistical weight to his fiber comparison. Contrary to science, Oakes opined that the fibers were "microscopically identical" and "microscopically the same." He also testified they were "consistent with" coming from specific items in Granillo's car.

He conveyed certainty where none existed. The 2016 PCAST Report is straightforward. PCAST concludes that it was wrong to "claim[] or imply[] that a sample came from a specific source with near-certainty or even absolute certainty, despite having no scientific basis for such opinions." 2016 PCAST Report, supra, at 54. Thus, PCAST stresses, "Without appropriate estimates of accuracy, an examiner's statement that two samples are similar - or even indistinguishable - is scientifically meaningless: it has no probative value, and considerable potential for prejudicial impact." Id. at 143; 2009 NRC Report, supra, at 161 ("In cases where there seems to be a morphological [hair] match (based on microscopic examination), it must be confirmed using mtDNA analysis; microscopic studies alone are of limited probative value.") (emphasis added).

"Consistent with" also sounds scientific. To a jury, it means the fibers matched. When an FBI expert tells the jury that fibers found on a victim's underwear are "consistent with" coming from the defendant's car seat, the jury hears a source-to-sample-match. "Microscopically identical" and "microscopically the same" conjure a similarly illusory aura of science-backed accuracy. These phrases inform a jury that the expert examined the fibers under a microscope and they were the same. They match.

But science established no such thing. No scientific studies have characterized reliability or error rates in fiber comparison techniques. There are no set standards for how many characteristics must correspond to conclude that fibers came from the same manufacturing batch. 2009 NRC Report, supra, at 162-63. Without error rate studies, validation research, and verified standards, Oakes had no foundation for the certainty his testimony conveyed. See id. Yet convey it he did.

Third, Oakes never told the jury that fiber comparison, as a discipline, can only produce class-level associations. The NRC Report concludes that "a 'match' means only that the fibers could have come from the same type of garment, carpet, or furniture; it can provide only class evidence." 2009 NRC Report, supra, at 163. Reliable fiber testimony must communicate this fundamental limitation. The expert testifying to a "match" must clarify that "matching" fibers means only that the questioned fibers and the known sample share class characteristics - they could have come from any number of items. And experts cannot rule out any of them.

Perhaps with the right guardrails, Oakes' testimony *could* have been admissible. But statements that fibers are "consistent with" another item must be crystal clear that the consistency is solely class-based, and does not establish a source match. "Consistency" walks a fine line with "match."

Context is everything. Here, absent any qualifying language explaining the scientific limits of the class evidence as to source, Oakes' "consistency" language skirted the class qualifiers and conveyed a "match" that exceeded the science. Without understanding that fiber evidence is limited to class evidence, the jury had every reason to conclude that Oakes matched the fibers to Granillo's car. And only Granillo's car.

Fourth, there was no testimony about validation studies. The NRC Report found, "There have been no studies of fibers (e.g., the variability of their characteristics during and after manufacturing) on which to base . . . a threshold [for concluding that two fibers came from the same manufacturing batch.]" Id. at 163 (emphasis added). The report continued, "Similarly, there have been no studies to inform judgments about whether environmentally related changes discerned in particular fibers are distinctive enough to reliably individualize their source, and there have been no studies that characterize either reliability or error rates in the procedures." Id. (emphases added).

The research does not exist. The scientific community has conducted no validation research determining that fiber comparison works for the purposes of ruling out or specifically identifying sources. No studies exist showing that when an

examiner says two fibers "match," they actually come from the same source with any measurable frequency.

Oakes' expert testimony relied on his training and experience. PCAST confronted this analytical flaw head-on. "[E]xperience' or 'judgment' cannot be used to establish the scientific validity and reliability of a metrological method, such as a forensic feature-comparison method. The frequency with which a particular pattern or set of features will be observed in different samples, which is an essential element in drawing conclusions, is not a matter of 'judgment.'" 2016 PCAST Report, supra, at 55 (emphasis added).

Experience doesn't validate a technique. Oakes' testimony hinged entirely on his nearly ten years in the FBI's hair and fiber division. But time on the job is not a substitute for empirical validation. No amount of experience transforms assertion into science.

Fifth, no unique environmental characteristics were identified. The NRC Report recognizes one narrow exception to fiber analysis' limitations. "In some cases, clothing and carpets have been subjected to relatively distinctive environmental conditions (e.g., sunlight exposure or laundering agents) that impart characteristics that can distinguish particular items from others from the same manufacturing lot." 2009 NRC Report, supra, at 161. Even then, the Report cautions,

"none of these characteristics is suitable for individualizing fibers." Id.

Oakes simply said the fibers were "microscopically identical" and "consistent with" coming from Granillo's car. He identified no unique environmental characteristics separating these fibers from others in the same manufacturing lot. Yet Oakes testified as if they could belong to only one car.

We now turn to Oakes' climactic opinion: the fibers were "consistent with" Price being in Granillo's car "with her pants off and panties exposed." This culmination compounded all that came before.

The prosecution asked, "[A]re [your findings] consistent with the allegation that [Price] was in the car with her pants off and panties exposed?" "Yes," Oakes answered. "The fact that I found seat cover fibers in the debris from the victim's panties would be consistent with that, yes."

Oakes' testimony exceeded the science.

First, his opinion assumes the predicate - the fibers came from Granillo's seat cover. The science did not support that premise. Second, Oakes validated the prosecution's theory. "Consistent with" gave the State's narrative the shine of scientific confirmation. That is not what a neutral expert does. That's what an advocate does. Third, the opinion converted class-level fiber evidence into proof of guilt. The

jury, in effect, heard: "The FBI's fiber analysis confirms that [Price] was in Granillo's car with her underwear exposed."

That's precisely what the DOJ letter condemned in Oakes' hair testimony. Oakes' expert opinion did what the DOJ letter said was inappropriate for hair opinions. It assigned "statistical weight or probability . . . that the questioned [evidence] originated from a particular source" in a manner that "could lead the jury to believe that valid statistical weight can be assigned" to the association.

Thus, Oakes' culminating opinion didn't just exceed the science. It was the predictable result of all that preceded it - assumed conclusions, unearned certainty, and concealed limitations.

We repeat. The 2009 NRC Report could not be clearer. Hair and fiber analysis have "the same limitations." Fibers "can be examined microscopically in the same way as hairs, and with the same limitations." 2009 NRC Report, supra, at 161 (emphasis added).

This parallel structure is not something we can sidestep. It controls our analysis. The DOJ found Oakes' hair testimony exceeded scientific limits. The circuit court and the ICA agreed. Hair and fiber comparison analysis share "the same limitations." See id. What's true for one is true for the other.

Here's the side-by-side comparison. For hair, Oakes testified that the sample was "consistent with originating from [Price]." The DOJ concluded this improperly "assigned to the positive association a statistical weight or probability" and "exceed[ed] the limits of the science." For fiber, Oakes testified that the samples were "consistent with coming from [Granillo's car seat]." The science does not distinguish between the two. Neither do we.

The ICA erred in deeming the hair testimony invalid while treating the fiber testimony as valid. Both disciplines have "the same limitations." What invalidated the hair testimony, invalidated the fiber testimony. To hold otherwise would be analytically erratic and scientifically indefensible.

Last, Oakes' fiber testimony cannot withstand current scientific understanding or evidentiary standards. No credible expert would testify that way today. No court would admit it. See HRE Rule 702; State v. Spies, 157 Hawai'i 75, 88, 575 P.3d 708, 721 (2025) ("[an] expert's analysis must meet a threshold level of reliability and trustworthiness") (citation omitted). Testimony that would be inadmissible now was false when admitted in 1990.

C. The False Evidence Standard Applies to Discredited Scientific Testimony

The ICA applied the wrong standard. McNulty's newly

discovered evidence standard does not govern post-conviction relief petitions concerning *discredited* scientific testimony. Newly-discredited scientific evidence is not new evidence. The expert testimony was never properly-admitted evidence to begin with. The testimony was always false.

The presentation of materially false evidence violates due process. McNulty's "newly discovered evidence" standard does not align with never-true evidence. The false evidence standard, rooted in constitutional due process, controls.

We hold that when scientific developments invalidate testimony presented at trial, the false evidence standard applies.

Beyond due process, the false evidence standard promotes accurate convictions, aligns legal standards with scientific reality, and creates appropriate incentives for the responsible use of forensic science. Within the HRPP Rule 40 post-conviction framework, the false evidence standard governs claims based on scientifically invalidated testimony.

Apply that standard here. The result follows. An FBI agent's scientific testimony powered the prosecution's case and boxed in Granillo's defense.

Because that testimony was materially false, Granillo's article I, section 5 right to a fair trial was violated. He is entitled to a new trial.

We start with the false evidence standard.

1. The False Evidence Standard

Under the Hawai'i Constitution, due process protects the right to a fair trial. Haw. Const. art. I, § 5. This court has held that the right to a fair trial is violated when there is a "reasonable possibility" that false evidence contributed to the conviction. Stone, 147 Hawai'i at 271, 465 P.3d at 718; Birano, 143 Hawai'i at 181-82, 426 P.3d at 405-06.

The principle is not unique to Hawai'i. The United States Supreme Court long ago established that a conviction obtained through false evidence violates due process. See Mooney v. Holohan, 294 U.S. 103, 112 (1935) (conviction obtained through perjured testimony violates due process); Napue v. Illinois, 360 U.S. 264, 269 (1959) (the State may not knowingly use false evidence to obtain a conviction); Giglio v. United States, 405 U.S. 150, 153 (1972) (knowingly using false evidence is "incompatible with 'rudimentary demands of justice'"). The D.C. Circuit applied this principle to the same type of forensic evidence at issue here. See Butler, 955 F.3d at 1057.

The false evidence must be material. Stone, 147 Hawai'i at 270, 465 P.3d at 717; State v. Teves, 5 Haw. App. 90, 96, 679 P.2d 136, 141 (App. 1984) (a new trial under HRPP Rule 33 requires false testimony of a "material prosecution witness"); Butler, 955 F.3d at 1057-58. The standard recognizes that false

evidence cases "involve a corruption of the truth-seeking function of the trial process." See United States v. Agurs, 427 U.S. 97, 104 (1976); see also Butler, 955 F.3d at 1058 (same).

The false evidence standard protects a fundamental constitutional right: the right to a fair trial untainted by materially false testimony.

We begin with the standard the ICA applied, and then explain why the false evidence standard is better suited to discredited scientific evidence.

2. McNulty's Newly Discovered Evidence Mismatch

McNulty doesn't fit. Unlike the false evidence standard, the newly discovered evidence standard does not align with later-discredited scientific testimony. The two standards serve different purposes and address different situations.

Per McNulty, newly discovered evidence warrants a new trial when the evidence (1) is discovered after trial; (2) could not have been discovered before or at trial through due diligence; (3) is material and not cumulative; and (4) would probably change the outcome of a retrial. 60 Haw. at 267-68, 588 P.2d at 445.

This standard contemplates evidence. That is, facts about what happened. The "new" evidence provides information about historical facts. For instance, a new alibi witness, documents that existed at trial but weren't found despite diligent search,

a post-trial confession by another person, or DNA test results that technological advances made available. The evidence was either present at trial but undiscovered, or new facts arose afterward.

Under the McNulty "newly discovered evidence" standard, the court adds new evidence and weighs its impact. But in Granillo's case, the court must subtract powerful forensic evidence that has been proven false. McNulty is ill-suited for cases involving later-discredited science. A different, less demanding standard applies.

Scientific propositions are true or false based on empirical reality, not contemporary belief. When the FBI agent shared his expert opinions with Maui County jurors, the testimony was either scientifically valid or not.

McNulty works for the type of evidence it covers - evidence that was not around at trial. But what about evidence that was never true, always false? What standard applies when forensic science testimony is later revealed to lack scientific validity?

The D.C. Circuit Court of Appeals' analysis in Butler is instructive. Butler confronted the same question we face, on nearly identical facts. 955 F.3d at 1053. The D.C. Circuit reversed a person's murder conviction based on improperly admitted hair microscopy evidence. Id. At trial, the prosecution's expert testified that hairs recovered from the

victim's clothing were "microscopically the same" as Butler's hair, "alike in all identifiable microscopic characteristics" to Butler's hair, and "matched [Butler's hair] in all microscopic characteristics." Id. at 1055-56. When asked how likely it was for two hairs to be microscopically alike yet come from different people, the expert said that in approximately 10,000 examinations, this happened "four or five times," something the prosecutor highlighted in closing. Id. at 1056.

In 2015, over forty years after Butler's conviction, the DOJ determined that the testimony against him "exceeded the limits of science." Id. at 1057. Based on the government's disclosure, the evidence was "invalid." Id. Butler sought post-conviction relief. Id.

The D.C. Circuit Court held that the hair evidence constituted "false evidence." Id. The government conceded the testimony "was false and exceeded the limits of science." Id. It also acknowledged that it "knew or should have known of hair microscopy evidence's inadequacies at the time of trial." Id. With falsity established, Butler turned to the dispositive question - materiality. "[T]he sole question for us is whether the prosecution's use of the false hair testimony against Butler was material." Id.

Butler's materiality analysis aligns with our own. False evidence is material, the D.C. Circuit held, if it "could in any

reasonable likelihood have affected the judgment of the jury.” Id. at 1058 (citation omitted). Because false evidence corrupts truth-detecting and undermines constitutional guarantees, the standard must be “quite easily satisfied.” Id.

Stone’s reasonable possibility standard serves the same function. Both Stone and Butler place the constitutional focus on the integrity of the conviction. Neither asks whether the remaining evidence is strong enough to save the verdict. The newly discovered evidence standard does.

The difference in burden matters. Per Stone, the defendant need only show a “reasonable possibility that the false testimony could have contributed to . . . conviction.” 147 Hawai‘i at 271, 465 P.3d at 718 (applying the false evidence standard to a motion for a new trial under HRPP Rule 33). Per McNulty, the defendant must show that the “evidence is of such a nature as would probably change the result of a later trial.” Kubota, 155 Hawai‘i at 145, 557 P.3d at 874 (emphasis added).

Newly discovered evidence’s forward-looking standard focuses on speculation about what a hypothetical jury might do at a retrial. This is an inherently uncertain inquiry that may fail to register the false evidence’s full impact.

Because convictions obtained by false evidence disrupt the accuracy of factfinding and have a constitutional dimension, the comparatively lighter false evidence standard fits. When a jury

hears false testimony - particularly false scientific testimony cloaked in the FBI's aura of authority - there can be little confidence in the verdict. A reasonable possibility standard better assesses false scientific evidence's actual effect on the jury.

This lesser burden makes sense both practically and from fairness perspectives. If defendants had to show that they would "probably" have been acquitted without the false testimony, most would fail. As in Granillo's case, prosecutions rarely turn on forensic evidence alone. Under a "probability" standard, the government's use of invalid science would go largely unchecked. So long as other evidence makes acquittal improbable, junk science expert testimony would be permissible. The degree of backwards-looking certainty required to find "probability" glosses over the harm wrought by false scientific evidence.

In contrast, the "reasonable possibility" standard asks the correct constitutional question. Did the false evidence undermine confidence in the *actual verdict*? This backward-looking inquiry understands that when a conviction relies even partially on false evidence, the verdict's reliability is compromised. Despite how confident reviewing courts reading transcripts years later might feel about a verdict based on other evidence.

As Agurs reasoned, the harm is "a corruption of the truth-seeking function of the trial process." 427 U.S. at 104. That corruption occurs the moment false evidence is presented. Not years later when an appellate court speculates it would "probably" have changed the outcome.

3. The Updated Science in This Case is Not Newly Discovered Evidence

Neither the 2009 NRC Report's nor the 2016 PCAST Report's findings qualify as "newly discovered evidence." Those reports reveal no new facts about what happened, identify no new witnesses, and do not uncover previously hidden documents. See State v. Mabuti, 72 Haw. 106, 112, 807 P.2d 1264, 1268 (1991); State v. Caraballo, 62 Haw. 309, 316-18, 615 P.2d 91, 97 (1980).

Rather, these two groundbreaking reports supply authoritative scientific analysis showing that expert testimony used to secure convictions across the country lacked validity. Federal agents, like Oakes, assured jurors in courtrooms like Maui's that they had scientifically determined with certainty exactly where hair and fiber samples originated. That assurance was untrue.

Reports documenting scientific advances operate differently than newly discovered evidence. The 2009 and 2016 reports evaluated the scientific validity of expert opinions used to

convict. They changed the view of pre-existing evidence. They did not discover new evidence.

The distinction matters. Justice Sotomayor recently explained that “newly-discredited forensic evidence is different from other newly-discovered facts.” McCrory v. Alabama, 144 S. Ct. 2483, 2487 (Mem) (2024) (Sotomayor, J., statement “respecting the denial of certiorari”). “Evidence that an entire mode of forensic analysis has no scientific basis[] . . . is of a different category from evidence that might call into question a witness’s credibility or motive to testify.” Id. A jury convicted McCrory of murder “based on forensic bite mark testimony that has now been roundly condemned by the scientific community[.]” Id. at 2483. That evidence wasn’t new evidence, Justice Sotomayor explained. See id. “Unlike a new witness to a murder or a new analysis of DNA evidence, the new evidence is simply a scientific consensus that the old evidence was unreliable. In McCrory’s case, for example, it is not that the dental mold was not of McCrory’s teeth or that the victim had no marks on her arm. It is simply that a modern scientist would be unable to testify that the two had anything to do with each other.” Id. at 2487.

The “new evidence” here is not a witness Granillo failed to call or a document he failed to produce. It is scientific

consensus that the expert's testimony exceeded the limits of science.

Oakes' hair and fiber testimony is discredited not by the discovery of new evidence. It is discredited by a fundamental shift in the scientific understanding of the evidence that was presented at trial. We now know that back then the State used unsound scientific methods to convict.

Newly discovered facts are a different type of evidence. See Mabuti, 72 Haw. at 112, 807 P.2d at 1268. Mabuti's motion for a new trial was "based on the late development of the discovery of a previously unknown witness, whose purported testimony contested the credibility of one of the State's witnesses." Id. Because newly discovered evidence - an actual new witness - was at issue, McNulty applied. Id.; see also Caraballo, 62 Haw. at 316-18, 615 P.2d at 97.

The 2009 NRC Report did not *make* Oakes' testimony false. It revealed that his testimony was always false. From the start, his testimony about the significance of his fiber analysis lacked scientific support. So there was no newly discovered fact about microscopic hair and fiber comparison. The Report revealed that the empirical foundation for Oakes' expert opinions never existed. What changed was the criminal justice system's awareness of that reality.

As one scholar put it, "[t]he fact that a consensus of scientific experts in a particular field once agreed on a principle but, based on new scientific data, no longer does is not the type of newly discovered evidence that most fresh-evidence doctrines contemplate. There was no misconduct by the prosecutors in presenting the evidence prior to the change in consensus precisely because, at the time of trial, the testimony represented the consensus of the field." Carrie Leonetti, The Innocence Checklist, 58 Am. Crim. L. Rev. 97, 121 (2021).

Granillo's case concerns false evidence, not newly discovered evidence. The appeal centers not on the belated discovery of new facts, but on the original admission of unreliable scientific evidence presented by an FBI agent.

4. Constitutional Rights Override Prudential Concerns Under Rule 40

There's another reason that McNulty does not apply. Constitutional rights eclipse prudential rules. Due process does not yield to finality interests or judicial efficiency concerns. See State v. Cruz, 486 P.3d 1, 3 (N.M. 2021) ("[F]undamental constitutional rights cannot be jettisoned for the sake of judicial efficiency.").

The false evidence standard descends from due process. Haw. Const. art. I, § 5; see Napue, 360 U.S. at 269 ("[A]

conviction obtained through use of false evidence[] . . . must fall under the Fourteenth Amendment").

In contrast, court rules create the new evidence standard. HRPP Rule 40 reflects prudential concerns about when post-conviction relief is appropriate. The due diligence requirement and probability-of-different-outcome standard promote finality and deter "sandbagging," the strategic withholding of evidence at trial only to raise it later. See McNulty, 60 Haw. at 268, 588 P.2d at 445 ("the composite knowledge of both the accused and his counsel will be considered" to determine whether the defendant diligently tried to locate the evidence); Eason v. State, 157 Hawai'i 252, 267, 576 P.3d 765, 780 (2025) (Rule 40's limitations on post-conviction relief "provid[e] a balanced approach to post-convictions proceedings that maintain the integrity of criminal convictions while also comporting with constitutional due process requirements.") (quoting Judiciary, Testimony to House Committee on Judiciary on S.B. 2, Proposed H.D. 1, 30th Leg., Reg. Sess. (Mar. 27, 2019)).

But these are not constitutional commands. They are judge-made rules that address prudential concerns appropriate only for discrete circumstances.

Newly discovered evidence is a prudential doctrine. False evidence is a constitutional violation. When the government obtains a conviction using false evidence, the conviction

offends due process. Stone, 147 Hawai'i at 271, 465 P.3d at 718. Constitutional protections require applying the false evidence standard rather than McNulty's prudential rule.

We pause to note that historically, due process was violated when the prosecution knew or should have known at trial that the evidence was false. Stone, 147 Hawai'i at 271, 465 P.3d at 718; Napue, 360 U.S. at 269 ("[A] State may not knowingly use false evidence, including false testimony, to obtain a tainted conviction[.]").

Later-discredited science though presents an unanswered question. The testimony was false when given. The falsity had not yet been recognized. The constitutional harm flows from using false evidence to convict, not from the prosecutor's awareness of falsity.

We hold that for cases involving discredited science, whether the State knew or should have known the testimony was false at trial is inconsequential. Convictions secured through false evidence violate due process, even if scientific advances revealed the falsity only after trial. See Stone, 147 Hawai'i at 272, 465 P.3d at 719.

The concurrence would require the prosecution to have known the scientific evidence was false before the false evidence standard applies. The Hawai'i Constitution requires no such thing.

We acknowledge the federal lineage. In Napue, the prosecutor let a witness deny a deal the prosecutor knew existed. 360 U.S. at 267. In Giglio, one prosecutor made a deal with a witness that the trial prosecutor never knew about. The witness denied any agreement on the stand. No one corrected him. But the Court held the office responsible. 405 U.S. at 154. Knowledge mattered in Napue and Giglio because the constitutional wrong was the prosecution's deliberate corruption of the trial. The remedy matched the wrong.

Napue and Giglio did not hold that knowledge is a constitutional precondition for relief. They held that the *knowing* use of false evidence violates due process. Neither case confronted whether the *unknowing* use of false evidence also violates due process. The issue never came up.

The suggestion that knowledge is necessary traces to dictum. In Agurs, the Court characterized the Mooney line of cases as involving "the knowing use of perjured testimony." 427 U.S. at 103. But knowing use already stretches beyond actual knowledge.

In Giglio, the trial prosecutor never personally knew the testimony was false. 405 U.S. at 154. The Court imputed knowledge from another attorney in the office. If the doctrine expanded once from actual knowledge to imputed knowledge, there is no principled reason it cannot expand again to reach cases

where no one knew because the scientific community itself had not yet recognized the falsity. See Anne Bowen Poulin, Convictions Based on Lies: Defining Due Process Protection, 116 Penn St. L. Rev. 331, 340 (2011).

Still, even with that expansion, every case in the Mooney line involved some form of knowledge. No United States Supreme Court case has held that its absence bars relief. Id. at 393; see also Evenstad v. Carlson, 470 F.3d 777, 783 (8th Cir. 2006) (observing that the Supreme Court has not resolved whether the unknowing use of false evidence violates due process).

One case points in the opposite direction. In Mesarosh v. United States, the Court ordered a new trial after learning that a key prosecution witness had testified falsely, even though the prosecution had presented the testimony unknowingly. 352 U.S. 1, 9 (1956). "The dignity of the United States Government will not permit the conviction of any person on tainted testimony." Id. Mesarosh focused on the integrity of the conviction, not the prosecutor's state of mind.

This court's precedent goes further. In Stone, the deputy prosecuting attorney did not know the officer's testimony was false until after trial. 147 Hawai'i at 272, 465 P.3d at 719. We held that this did not matter. "[T]he good faith of the prosecutor in failing to correct false testimony regarding impeachment material has no bearing on whether a defendant

received a fair trial as required by due process.” Id. (quoting Birano, 143 Hawai‘i at 189, 426 P.3d at 413). If the prosecutor’s good faith is irrelevant when a witness testifies falsely at trial, it cannot become relevant when an entire forensic field is later debunked. The principle is the same. What matters is whether the trial was fair. Not whether the prosecutor knew it wasn’t.

The concurring opinion reads Stone for more than that. It traces Stone through its adoption of the Teves four-factor test for new-trial motions, points to the fourth factor (harmless beyond a reasonable doubt), and concludes that Stone forecloses the false evidence standard’s materiality inquiry.

Stone did apply harmless error. But what Stone applied does not control the question before us.

Start with procedure. Stone arrived on a motion for new trial under HRPP Rule 33. 147 Hawai‘i at 265, 465 P.3d at 712. The Teves test exists for Rule 33 motions. 5 Haw. App. at 96, 679 P.2d at 141. Its four factors are tailored to that posture: (1) the testimony of a *material* prosecution witness was false, (2) the defendant did not discover the falseness until after trial, (3) the late discovery was not due to lack of diligence, and (4) the false testimony was not harmless beyond a reasonable doubt because there was a reasonable possibility it contributed to the conviction. Stone, 147 Hawai‘i at 270, 465 P.3d at 717

(citing Teves, 5 Haw. App. at 96, 679 P.2d at 141). Stone applied Teves because Teves was the test for the case before it. A Rule 33 motion based on a single officer's lie discovered shortly after trial. Id. at 270-71, 465 P.3d at 717-18.

Granillo is different. Granillo is a Rule 40 petition involving expert testimony that the scientific community, NRC, PCAST, and the DOJ have all since repudiated. The first three Teves factors do not fit. Factor two asks whether the defendant discovered the falsity after trial. In a discredited-science case, no one discovered any falsity at the time because no one yet thought the science was wrong. Factor three asks about due diligence. No diligence in 1990 could have revealed what the 2009 NRC Report would later announce. Those Teves factors were not built for this kind of claim.

Yet the concurring opinion borrows only the fourth Teves factor and drops it into Granillo's case. It treats one prong of a Rule 33 framework as the freestanding constitutional standard for a Rule 40 petition. The harmless-error language gets carried over, severed from the framework that gave it meaning. That conflates two standards into one.

One more point about what Stone actually held. The Teves test Stone applied requires, as factor one, that the false testimony be that of a "material prosecution witness." 5 Haw. App. at 96, 679 P.2d at 141. The test begins with materiality.

A material prosecution witness is one whose false evidence would influence the verdict. See Stone, 147 Hawai'i at 269, 465 P.3d at 716 (the officer was the only witness to the defendant's alleged possession of methamphetamine).

Factor four operates only once materiality clears. Stone applied both, in sequence, as a single test. Materiality and harmless error are part of one Teves test, not opposing standards.

Stone has work to do here. Stone tells us prosecutorial knowledge is *not* required for a false evidence claim under article I, section 5. 147 Hawai'i at 272, 465 P.3d at 719. That is the principle we draw from it. We do not draw a Rule 40 discredited science standard from a Rule 33 newly discovered evidence case. Stone did not face this posture. Stone did not confront this kind of evidence. Stone did not announce a standard for cases it had not seen.

The right doctrinal frame here is the one the D.C. Circuit applied in Butler. Butler addressed this exact problem. A conviction built on FBI hair and fiber testimony the DOJ has disavowed, decades after trial, in a post-conviction posture. Butler applied materiality. 955 F.3d at 1058. Article I, section 5 calls for the same protective standard when the same kind of injury comes through our courts. We do not transplant the Teves framework into the Rule 40 context. We adopt the

materiality standard that Butler applied to the same kind of conviction.

The concurrence hinges on the prosecution's concession of knowledge in Butler. That admission, though, does not excuse what the State failed to know. It did not drive the court's analysis. Instead, Butler framed the dispositive question as "whether the prosecution's use of the false hair testimony against Butler was material." Id. at 1057. Not whether the prosecution knew. The D.C. Circuit's holding hinged on *materiality*, not mental state. False evidence is material if it "could in any reasonable likelihood have affected the judgment of the jury." Id. at 1058.

The government's admission in Butler resolved a preliminary question: whether the testimony was false. Once that was established, the court moved to harm. Knowledge was not a doctrinal requirement of the holding. It was a reason the court did not need to linger on the threshold question of falsity. The government agreed the evidence was false *and* that it knew or should have known. That shortcut made the path to materiality shorter. It did not make knowledge a condition of relief.

Discredited science proves the point. No one lied. No one concealed. The prosecution, the defense, and the court all relied on a scientific consensus that turned out to be wrong. The constitutional injury is not prosecutorial bad faith. It's

the use of false evidence to convict. The song remains the same. Only the source of the falsity changed.

The concurrence leans on Fukusaku for this exact point. In 1997, this court called the "principles and procedures underlying hair and fiber evidence . . . well-established and of proven reliability." 85 Hawai'i at 474, 946 P.2d at 44. Granillo's trial was in 1990. No prosecutor, no defense lawyer, no judge could have known what the 2009 NRC Report would later reveal.

Granted - no one could have known.

Granillo is not less wrongly convicted because everyone in 1990 acted in good faith. He sits in prison on testimony the science no longer supports. Good faith describes the lawyers. It does not describe the defendant's plight. A standard that requires fault before relief leaves them without a remedy. Article I, section 5 exists for cases like this one.

Conditioning relief on knowledge would shield an entire category of constitutional violations. Convictions obtained through evidence that no one yet knew was false would fall outside the false evidence standard. The defendant's constitutional injury would be the same. The verdict would be equally unreliable. The trial would be equally unfair. But the defendant could only seek relief under the newly discovered evidence standard, a far heavier burden. Knowledge does not

make the evidence more or less false. And its absence does not salvage the verdict.

A knowledge requirement would also create perverse incentives. "If the prosecution is able to defeat the defendant's argument that false testimony violated due process simply by insulating itself from knowledge of information pertinent to the case, the constitutional protection of the right to a fair trial is compromised." Poulin, supra, at 349. Prosecutors would have less reason to rigorously vet forensic testimony before trial. The government would benefit by staying behind the science as forensic methodologies progress. Racing to convict before scientific consensus catches up would go unchecked. Constitutional protections do not depend on whether the legal system recognizes current scientific reality.

The concurring opinion looks outside Hawai'i for support. To a concurrence in Ex Parte Warner cautioning against side-stepping prosecutorial knowledge. 721 S.W.3d 436, 445 (Tex. Crim. App. 2025) (Finley, J., concurring). Warner is one judge's separate writing on a denied habeas petition. It binds no one. Not even in Texas. And the federal due process doctrine that animates it cannot tell this court how to read article I, section 5.

We are not side-stepping anything. We are doing what state constitutionalism asks us to do. Stand our ground.

The concurrence seizes on the federal precedent the Texas court's concurring judge cited. The United States Supreme Court has "never held that an unknowing use of false evidence violates due process," that judge wrote. Warner, 721 S.W.3d at 443 (Finley, J., concurring). The concurrence also cites Glossip v. Oklahoma, 604 U.S. 226 (2025), as confirming a knowledge requirement. But Glossip addressed a knowing-use case. It involved a prosecutor who knew. Id. at 228. It did not confront what shakes out when an entire branch of forensic science collapses.

That statement is not a boundary. Glossip described the precedent as it stood. It did not shut the door on cases like this one.

The concurrence's insistence that the prosecution's knowledge concession in Butler counsels adoption of Stone in this context, like its reliance on Glossip, ultimately depends on the premise that federal constitutional doctrine controls this court's interpretation of article I, section 5. It does not.

We interpret the Hawai'i Constitution on its own terms. The United State Supreme Court's construction of the federal Due Process Clause does not define the protections of our state's due process clause. This court "reason[s] independently, untethered from the Supreme Court's analysis of the United

States Constitution." State v. Wilson, 154 Hawai'i 8, 14, 543 P.3d 440, 446 (2024).

The Court that now defines federal due process does not honor the work of 1954. It revives the work of 1857. The work of 1896. The Constitution must be interpreted "according to its true intent and meaning when it was adopted." Dred Scott v. Sandford, 60 U.S. 393, 405 (1857).

Today's hubristic originalists use the same method to control modern life. See City & Cnty. of Honolulu v. Sunoco LP, 153 Hawai'i 326, 361, 537 P.3d 1173, 1208 (2023) (Eddins, J., concurring) ("A justice's personal values and ideas about the very old days suddenly control the lives of present and future generations.").

The Court overrides what Congress passed. It overrides what the people chose. All to serve its own ends.

What this Court has done to constitutional rights, democratic institutions, and the rule of law explains why Hawai'i's Constitution takes no instruction from it.

Article I, section 5 provides versatile and sovereign protection. This court does not anchor Hawai'i's due process rights to the federal floor. Especially one that keeps sinking.

We take no guidance on the meaning of due process from a court that gutted due process protections in Dobbs v. Jackson Women's Health Org., 597 U.S. 215 (2022). Zuffante called it

straight. Dobbs erased a "generations-long constitutional right, stripping autonomy from half the population, and empowering states to force birth." State v. Zuffante, 157 Hawai'i 194, 200, 576 P.3d 243, 249 (2025).

Article I, section 5 does not import that results-driven approach to due process. We follow principles, not agendas.

The Supreme Court's imperious ideology does not stop at due process. The same jurisprudence has cratered democracy itself. Start with the Voting Rights Act.

The Roberts Court did what Congress never would. It rewrote the Voting Rights Act of 1965, a cornerstone of American civil rights, democratically enacted and repeatedly reauthorized. Shelby County v. Holder, 570 U.S. 529 (2013), began the judicial demolition, inventing a textually unsupported equal-sovereignty fiction and striking down preclearance on a hunch that the law worked too well. Brnovich v. Democratic National Committee, 594 U.S. 647 (2021), fabricated "guideposts" nowhere in Section 2 to greenlight racial discrimination in voting. Louisiana v. Callais, 608 U.S. ___, 146 S. Ct. 1131 (Apr. 29, 2026), buried what remained of the crown jewel of the civil rights movement. Pretend law for a real statute.

The Court then ditched its own thirty-two day default for releasing decisions and hustled out its judgment mid-primary, a favor granted over objection only twice in twenty-five years.

Callais v. Louisiana, 608 U.S. ___, 146 S. Ct. 1111, 1113 (May 4, 2026) (Jackson, J., dissenting). Weeks later, on its shadow docket, the Court tossed an eleven-day trial record built on fifty-one witnesses, 790 exhibits, 2,600 pages of testimony, and a 270-page opinion by a three-judge court. See Singleton v. Allen, 782 F. Supp. 3d 1092, 1115, 1355 (N.D. Ala. 2025). It resurrected a tainted congressional map the three-judge factfinders found deliberately entrenched racial bias against Black voters. Allen v. Milligan, 608 U.S. ___, 146 S. Ct. 1377 (June 2, 2026); see also Hilo Bay Marina, LLC v. State, 156 Hawai'i 478, 516, 575 P.3d 568, 606 (2025) (The "Court's frequent misrepresentation of the factual record and its throw-judges-under-the-bus disdain for district courts, the fact-finders of the federal judiciary, harm the justice system.").

The Roberts Court sees only white. It refuses to acknowledge who the Equal Protection Clause was written to protect. The freed people, their descendants, and all others denied equal citizenship. U.S. Const. amend. XIV, § 1. It turns its back on what is in plain sight. The Fourteenth Amendment is not colorblind. It never was.

The Court calls the Constitution colorblind while engineering the dilution of Black votes, the unraveling of hard-fought civil rights remedies, and the erasure of Black

history. That is not blindness. That is white sight, by design.

A Constitution interpreted this way is not colorblind. It is whatever the Court needs it to be. A way to advance its partisan project. The damage to democracy extends beyond the Voting Rights Act.

In Citizens United v. Fed. Election Comm'n, 558 U.S. 310 (2010), the Court claimed fidelity to text, history, and tradition while invalidating yet another democratically vetted law, handing corporations the same speech rights as flesh-and-blood Americans and letting dollars talk louder than voters. See Sunoco, 153 Hawai'i at 362, 537 P.3d at 1209 (Eddins, J., concurring) (originalism applies selectively and vanishes inconveniently); Leo E. Strine, Jr. & Nicholas Walter, Originalist or Original: The Difficulties of Reconciling Citizens United with Corporate Law History, 91 Notre Dame L. Rev. 877 (2016) (Citizens United cannot be reconciled with corporate law history).

Other decisions followed. The Court abandoned partisan gerrymandering to the gerrymanderers, refusing for the first time to remedy a constitutional violation because it believed the task beyond judicial competence. Rucho v. Common Cause, 588 U.S. 684 (2019); see id. at 721 (Kagan, J., dissenting). It

placed a president above the law. Trump v. United States, 603 U.S. 593 (2024).

Last month, Nat'l Republican Senatorial Comm. v. Fed. Election Comm'n, 609 U.S. ____ (June 30, 2026), made Citizens United look quaint, shredding coordinated spending limits Congress had enacted, and ensuring that those who bankroll elections drown out the ordinary person. Billionaires spend to be repaid. Everyone else just votes. The Roberts Court has made sure one's wealth counts more than another's vote.

Rulings run in one direction, time after time. Weakening protections for those with less power. Fortifying those with more. The pattern speaks for itself. A court that systematically dismantles democratic safeguards, steamrolls constitutional liberties, and tramples human dignity does not chart the course for the Hawai'i Constitution.

Our constitutional system was designed for times like these. Federalism is not a formality. It is the architecture. The framers built dual sovereignty into the structure of American government as an independent check against concentrated federal power. A Supreme Court driven by agenda and intent on swiping power that belongs to the people is exactly what that check was built for.

When six justices walk away from those they are supposed to protect, state constitutions hold the line. That is not defiance. That is the design.

State constitutionalism makes it easy to consider Roberts Court jurisprudence "white noise." See Hilo Bay Marina, 156 Hawai'i at 518, 575 P.3d at 608.

Add it all up. Draining due process. Rolling back voting rights. Flooding elections with money. Rubber-stamping gerrymandering. Crowning a president. Blessing discrimination in the name of the Constitution. Fulton v. City of Philadelphia, Pa., 593 U.S. 522 (2021); 303 Creative LLC v. Elenis, 600 U.S. 570 (2023). Looking at naked racism and seeing none of it. Mullin v. Doe, 609 U.S. ____ (June 25, 2026) (racist words not "overtly racial"). Making the country more dangerous with a Second Amendment unmoored from text or history and unrecognizable to the framers who wrote it. New York State Rifle & Pistol Ass'n, Inc. v. Bruen, 597 U.S. 1 (2022); Wilson, 154 Hawai'i at 22, 543 P.3d at 454 ("disabl[ing] the states' responsibility to protect public safety, reduce gun violence, and safeguard peaceful public movement" with its deadly jurisprudence). Then striking down a careful law and showing disdain for Hawai'i's constitutional traditions. Wolford v. Lopez, 609 U.S. ____ (June 25, 2026).

Subverting congressional choices with a homemade “major questions” power grab that plays “get-out-of-text-free cards” to block agencies from doing what Congress told them to do. West Virginia v. Env’t Prot. Agency, 597 U.S. 697, 779 (2022) (Kagan, J., dissenting). Then commandeering the interpretive authority Congress gave federal agencies, overruling Chevron after forty years because, to this particular Court, precedent is advisory. Loper Bright Enters. v. Raimondo, 603 U.S. 369 (2024).

This term, transmuting federal spending programs into private contracts, the Court forged the Spending Clause to “reduce[] some of Congress’s greatest legislative achievements.” Landor v. Louisiana Dep’t of Corr. & Pub. Safety, 609 U.S. ____ (June 23, 2026) (Jackson, J., dissenting). Days later, it freed the President to fire at will the very commissioners a law shielded from removal, discarding a unanimous opinion, Humphrey’s Executor, on a cherry-picked slice of history – a century of settled practice recast as a mistake, competent governance sacrificed to the partisan cause. Trump v. Slaughter, 609 U.S. ____ (June 29, 2026). The next morning, fair-weather textualists – living constitution originalists, really – deserted the text and our nation’s history the moment it promised citizenship, one vote from writing that right out of the Constitution. Trump v. Barbara, 609 U.S. ____ (June 30, 2026).

That's not all life tenure and zero accountability have produced lately. But it's enough.

Article I, section 5 needs no part of this. The Hawai'i Constitution was built to stand on its own. And so it does.

We hold that prosecution knowledge is not required to invoke the false evidence standard under article I, section 5.

The concurrence pushes harmless beyond a reasonable doubt because, in its view, materiality is too generous. That criticism mistakes the function each standard serves.

Harmless beyond a reasonable doubt asks how strong the State's other evidence looks once the constitutional error is set aside. Could the conviction stand without the tainted testimony? If yes, the error is harmless. The inquiry centers on the strength of what remains.

Materiality asks a different question. Could the false testimony have affected the jury's judgment? The focus is not on what remains in the State's case. It is on what the false evidence may have done to the verdict the jury actually returned.

The constitutional violation under article I, section 5 is a verdict built on false evidence, not weakness of the State's case. That is why materiality is the better fit. It asks the constitutional question. Harmless beyond a reasonable doubt asks a sufficiency question. The two are not the same.

Stone did not equate them. Stone applied Teves because Teves fit a Rule 33 motion. Granillo asks a different question in a different posture. Each standard does protective work in the doctrinal context for which it was designed.

The false evidence standard provides a doctrinal framework for an emerging category of post-conviction claims: convictions built on forensic evidence that science later discredits. Harmless error provides no such framework.

Scientific evidence carries outsized persuasive force. False scientific evidence fundamentally compromises the fairness of a trial. The constitutional violation is complete when false scientific evidence contributes to conviction. Not when the prosecution belatedly learns of the falsity.

The concurrence points to Butler's own description, that materiality is "a veritable hair trigger for setting aside the conviction." 955 F.3d at 1058. It warns that, in another case, the standard could "mandate a wholly unjust result."

That worry misreads the standard. The trigger is sensitive by constitutional design. False evidence twists the trial's truth-seeking function. The standard must register the distortion. That's not a defect. That's the protection at work.

Materiality is not automatic reversal. It asks whether false evidence could in reasonable likelihood have affected the

jury's judgment. Id. Slight-weight testimony fails it. Overwhelming independent proof may defeat it. The standard is no rubber stamp.

The concurring opinion also arrives at the same result here under the harmless-error standard. Granillo gets a new trial either way. The "wholly unjust result" lives only in a hypothetical case the opinion imagines but does not describe. On this record, the answer does not change.

We hold that the false evidence standard governs when scientific testimony is later revealed as invalid. Constitutionally, convictions obtained with false evidence violate due process regardless of when the falsity becomes apparent. Doctrinally, Butler applies this standard to forensic science discredited by the 2009 NRC Report. As a matter of policy, the standard promotes accurate convictions, responds to scientific advances, and incentivizes careful vetting of expert testimony.

This standard requires neither due diligence nor a showing that acquittal was probable. A defendant need only show a reasonable possibility that the false evidence contributed to the conviction.

We now apply the false evidence standard to Granillo's case.

5. The Fiber Evidence is Material

We hold that there is a reasonable possibility that Oakes' expert opinions contributed to Granillo's conviction. See Hirata, 152 Hawai'i at 33, 520 P.3d at 231. His hair and fiber testimony was material.

From opening statement to closing argument, the State made Oakes' testimony the centerpiece of its case. The hair and fiber evidence did not just corroborate Price's account, it gave contested witness testimony the veneer of scientific certainty. The message to the jury was clear. Even if it doubted Price's testimony, the science could not be doubted. The FBI said the hair matched. It said the fiber matched. And scientific evidence doesn't lie.

In opening, the prosecution told the jury that "physical evidence adduced through hair and fiber analysis [placed Price] in [Granillo's] car that evening." This was no passing reference. The prosecution started its case by telling the jury that the hair and fiber would corroborate Price's account. It framed its theory of the case around a promise to the jury: that scientific analysis would prove Price was in Granillo's car with her pants off.

The State bookended its theme during closing. It devoted substantial attention to the fiber evidence and preempted challenges to Price's credibility. The hair and fiber evidence,

paired with Price's testimony, proved three things, the State urged. The scientific evidence showed that (1) she was abducted, (2) she was in Granillo's car with her pants on, then off, and (3) the person who undressed and sexually assaulted Price was Granillo.

The State's second point relied entirely on Oakes' fiber testimony. The fiber evidence proved its theory. The prosecutor explained that the "green fibers" from Granillo's car were found in Price's pants and underwear, "[a]nd each one of these fibers are identical to each other. They were found to have matched the seat cover of the driver's seat of [Granillo's] car." (Emphases added.)

Without the fiber evidence "proof" that Price's underwear had contacted Granillo's seat cover, the prosecution had no scientific evidence that Price's clothing had been removed in Granillo's car. The evidence "establishing" that Price was in Granillo's car with her pants down could have affected the jury's verdict. Thus, the evidence was material.

Expert testimony carries great weight in jury deliberations. This court has observed that when it comes to "experts' 'aura of special reliability and trustworthiness,' there is a danger that jurors will 'abdicate their role of critical assessment' or 'surrender their own common sense in weighing testimony.'" David, 149 Hawai'i at 478, 494 P.3d at

1211 (quoting State v. Batangan, 71 Haw. 552, 556, 799 P.2d 48, 51 (1990)). Experts opining on physical evidence connecting defendants to a crime hold significant sway.

Here, Oakes touted his expert credentials and knowledge. He wasn't just any expert. He was a "supervisory special agent with the FBI." He had worked there for twelve-and-a-half years. For nine-and-a-half years, he performed hair and fiber examinations in the FBI's specialized hair and fiber forensic division. Local, state, and other federal law enforcement agencies across the nation relied on him to analyze hair and fiber samples. Oakes estimated that he had conducted two to three thousand hair sample analyses.

Given his credentials, the jury had every reason to trust Oakes.

Oakes delivered his conclusions with scientific certainty. The hair came from Price. The fibers came from Granillo's car.

When a well-credentialed expert says "microscopically identical" and "match," the testimony conveys hard, objective, empirical fact. The microscope doesn't lie. The fibers match or they don't. Oakes' perceived objectivity gave his scientific conclusions unearned credibility. As the PCAST Report recognized, when experts testify about forensic comparisons, "the expert and the prosecution intend the statement to carry weight." 2016 PCAST Report, supra, at 121.

That weight only increases when an expert stops just short of certainty. Oakes did not say that the fibers "might" have come from Granillo's car or "could" have come from his car. He told the jury they were "consistent with" coming from specific items in Granillo's car. To a jury, that language was indistinguishable from certainty.

The defense didn't question Oakes' methodology. It asked about the number of samples and collection locations. But it did not challenge the scientific validity of fiber comparison analysis itself. No one did. Courts nationwide had accepted fiber comparison evidence, and the FBI had used it for decades.

Granillo did not present any witnesses or offer a coherent alternative theory of the case. The defense, in both its opening and closing, focused entirely on inconsistencies in Price's testimony.

False evidence forces the defendant's hand. After the State presented Oakes' fiber evidence linking Price to Granillo's car, there was no way Granillo's defense could have credibly argued Price was never in his car.

Naturally, the defense focused on undermining Price's credibility as to the events that took place in the car. And it avoided drawing attention to the evidence purportedly placing Price there with her pants and underwear off.

False government agency-backed evidence that effectively forecloses other evidence compromises the defendant's ability to present a complete defense at trial. That is a due process violation. See David, 149 Hawai'i at 481, 494 P.3d at 1214 ("A defendant's right to present a complete defense is vital to due process.") (citation omitted).

As a result, the trial was not fair.

The prosecution's case relied on Price's account. The defense attacked her credibility. Without the false forensic evidence to bolster Price's testimony, the prosecution's case weakened.

First, Price inconsistently testified about the nature of the alleged sexual assault. She told the emergency room physician that "she had been forced to perform vaginal intercourse." And according to the emergency room doctor, she "denied any fellatio or any sodomy." Yet at trial, Price testified that Granillo forced her to perform oral sex and that there was no vaginal intercourse. She said Granillo "made [her] perform or attempt to perform fellatio upon him." She also testified that Granillo did not enter her with his penis because he did not have an erection and that Granillo put his hand in her vagina.

Second, Price gave contradictory accounts of her escape. At first, she testified she was wearing slippers when she was

grabbed from her car. However, she later testified that when she escaped at the breakwater, she was barefoot because she had left her shoes in her car. On direct, Price testified that she jumped out of the car, and *then* the car started up. On cross, she said the car was moving when she jumped from it.

Third, Price testified that Granillo repeatedly grabbed her hair and banged her head against the passenger window. Before the grand jury, she said this happened "approximately twenty times." Yet the emergency room physician recounted that Price reported no head pain. When confronted with her prior "twenty times" statement, Price responded, "it wasn't the twenty times." The defense argued in closing that had her head truly been slammed against the window twenty times, more than a single strand of hair would have been found in the car.

Fourth, the responding officer testified that his report omitted "any details of what type of sexual assault or what went on in this sexual assault" because Price continually changed the details about how she was taken from her car and sexually assaulted. Due to these inconsistencies, the officer, on his supervisor's advice, reported only the "basic story," leaving the "detective who would be taking the case" to "get the details of the story out of her."

Fifth, Price testified that she had never seen Granillo before the assault. The first time she saw him was when he

pulled up "and told [her] that the police were of no use to [her.]" Officer Goto, though, testified that when he initially responded to the report of a woman crying for help, he had directed Tester and Granillo to leave the parking lot while Price was still there. He further testified that Price, Tester, and Granillo at one point yelled at one another. This testimony suggested that Price *had* seen Granillo before he allegedly returned to kidnap her. Further, Granillo himself acknowledged to a detective that he was present at the shopping center at the same time as Price.

The Rule 40 court found "overwhelming and compelling" evidence of guilt. We disagree.

A careful examination of the record shows that only the hair and fiber evidence conclusively established that both Price and Granillo had been in his car together. And only the fiber evidence placed Price in the car with her pants off.

The non-forensic evidence demonstrated that Price was stranded at the shopping center when police first arrived, officers directed Granillo to leave, something happened to Price, she ended up at the breakwater, and she suffered injuries. The evidence also showed that a hat with a carpenter's union decal and Price's cosmetics were found at the breakwater, Granillo was a carpenter, a WD-40 can and white t-

shirt ended up in Price's purse, and two knives were later found in Granillo's car.

This evidence did not establish that after leaving the parking lot, Granillo returned and approached Price, forced her into his car, caused her injuries, and sexually assaulted her. Nor did it establish that she was in his car at the breakwater. The hair and fiber evidence filled this gap.

The hair and fiber evidence was consequential. Oakes' testimony provided the only direct evidence that (1) Price had been in Granillo's car (hair "matched" Price); (2) Price's underwear had contacted his car's seat cover (fibers on her underwear); and (3) Price's pants had contacted his car's carpet (carpet fibers on her pants). The fiber evidence corroborated the prosecution's central theory that Price was in Granillo's car with her pants on, then off.

Granillo's conviction depended on Price's word. No other evidence placed her in his car. The hair and fiber evidence provided that connection. And the fiber evidence was the only non-testimonial proof that Price had been in Granillo's car with her pants removed and underwear exposed. Without this evidence, the prosecution's theory relied entirely on disputed testimony.

We hold that the presentation of materially false evidence violated Granillo's article I, section 5 right to a fair trial.

IV.

We vacate the ICA's July 30, 2025 Judgment on Appeal, the circuit court's December 16, 2022 order denying petitioner's Rule 40 petition, and final judgment. We remand for a new trial.

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/s/ Vladimir P. Devens

/s/ Sabrina S. McKenna

/s/ Todd W. Eddins

