No. 21-1601

IN THE
Supreme Court of the United States

ARELI ESCOBAR,

Petitioner,

v.

STATE OF TEXAS,

Respondent.

On Petition for a Writ of Certiorari
to the Texas Court of Criminal Appeals

BRIEF OF THE INNOCENCE NETWORK AND THE CENTER FOR INTEGRITY IN FORENSIC SCIENCES, INC. AS *AMICI CURIAE* IN SUPPORT OF PETITIONER

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TABLE OF CONTENTS

TABLE OF AUTHORITIES

Page(s)

Cases

Other Authorities

INTEREST OF THE *AMICI CURIAE*[1]

The Innocence Network (the Network) is an association of independent organizations dedicated to providing *pro bono* legal and investigative services to prisoners for whom evidence discovered post-conviction can provide conclusive proof of innocence. The Network's 68 current member organizations represent hundreds of prisoners with innocence claims in 49 States, the District of Columbia, and Puerto Rico, as well as in other countries around the world.[2]

The Network and its members are dedicated to improving the accuracy and reliability of the criminal justice system in future cases. Drawing on lessons from cases in which the system has convicted innocent persons, the Network advocates study and reform designed to enhance the truth-seeking functions of the criminal justice system to ensure that future wrongful convictions are prevented.

The Center for Integrity in Forensic Sciences, Inc. ("CIFS") is a national non-profit organization incorporated in Wisconsin. CIFS is the first non-profit organization in the United States to focus exclusively on strengthening forensic science in order to improve the reliability and safety of criminal prosecutions. Its educational and service goals span all facets of the judicial system and experiential education of tomorrow's lawyers and scientists.

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[1] All parties have consented to the filing of this brief. No counsel for any party authored this brief in whole or in part, and no party, counsel, or person other than *amici*, their members, and their counsel contributed money to fund the preparation or submission of this brief.

[2] The Appendix to this brief lists the member organizations of the Network for amicus brief purposes.

Amici have a strong interest in the question presented by the petition for certiorari. In particular, *amici* have repeatedly seen first-hand how DNA evidence, with its unprecedented forensic power and influence on juries, acts as a double-edged sword in the criminal justice system. When reliably developed and honestly presented, it can decisively establish innocence or guilt in a criminal case. But *amici* also know from experience that, when a conviction is secured through DNA evidence shown to be false, the risk of wrongful conviction is intolerably high—especially in a death-penalty case, like this one, with no other reliable incriminating evidence. Indeed, the error here was so egregious and obviously material that the government itself has made a rare concession of error. The decision of the Texas Court of Criminal Appeals (CCA) to ignore that concession and reject the Texas habeas court's meticulously documented recommendation to grant relief is an egregious betrayal of the ideals of fair and accurate criminal justice *amici* seeks to advance.

The Network and CIFS therefore write to offer their perspective on why relief from this Court is urgently warranted.

INTRODUCTION AND SUMMARY OF THE ARGUMENT

"Modern DNA testing can provide powerful new evidence unlike anything known before." *Dist. Attorney's Office For Third Judicial Dist. v. Osborne*, 557 U.S. 52, 62 (2009). When used properly, this evidence has the potential to decisively advance the truth-seeking function of trials. But the very power of DNA evidence carries significant risks when such evidence is used improperly. There is growing recognition that jurors are

at risk of viewing DNA testing as infallible, with little regard to how it has been prepared or presented. "Given the persuasiveness of such evidence in the eyes of the jury," this Court has emphasized, "it is important that [DNA evidence] be presented in a fair and reliable manner." *McDaniel v. Brown*, 558 U.S. 120, 136 (2010) (per curiam). Otherwise, unreliable or misused DNA testing introduced against defendants at trial will lead to wrongful convictions.

This case shows why. Petitioner Areli Escobar was convicted and ultimately sentenced to death based on DNA testing that was later shown by the defendant, and conceded by the prosecution, to be unreliable. Indeed, the purported DNA evidence was so flawed that the municipal forensics lab that collected, analyzed, and provided the crucial testimony on the DNA was shuttered for violations of professional standards so egregious and intractable that it could not be safely reopened. And that pattern of misconduct was on full display in Mr. Escobar's case. The DNA evidence was exposed to severe contamination risks at the lab, and the analysts assigned to this case repeatedly ignored best practices and engaged in bias-driven manipulation of the testing to incriminate Mr. Escobar. The prosecution broadcast this false testing as the centerpiece of its case, and one juror even stated publicly that the DNA evidence took him off the fence and convinced him to join a guilty verdict.

The already significant risk that Mr. Escobar was wrongfully convicted becomes enormous when one considers that the other forensic evidence introduced against him was *also* unreliable. The shoe-print analysis offered by the prosecution was unscientific and showed nothing more than that a tread pattern on the

crime scene resembled a pattern found on thousands of other shoes in the area, including one of Mr. Escobar's. The supposed fingerprint "match" to Mr. Escobar was the result of biased mid-trial retesting, involved a low-quality latent print, and could not scientifically be described as a "match" in any event. And the remaining evidence did not remotely support a guilty verdict.

The Texas habeas court recognized all this and correctly recommended habeas relief. Remarkably, the State *agreed* with that recommendation and urged the CCA to issue the writ. The CCA's refusal to grant relief on these facts—or even to *acknowledge* the State's admission of error, despite the State's own request for reconsideration—is an obvious violation of this Court's precedents, and is manifestly unjust.

This Court should therefore summarily reverse or set the case for argument.

ARGUMENT

I. DNA evidence can have dangerously outsized influence on jurors, and the false DNA evidence introduced against Mr. Escobar was enormously prejudicial.

DNA testing, when carried out correctly, brings enormous benefits to the criminal justice system. But its very power carries with it significant risks from incompetence and abuse. Scholarship and courts around the country increasingly recognize that juries often reflexively assume DNA testing is conclusive proof of guilt or innocence—even though the reality is that DNA evidence can easily be misused, misrepresented, or misinterpreted. So when false DNA evidence is the cornerstone of a prosecution, the risk of wrongful conviction is severe.

That was the case here. Mr. Escobar was convicted based on DNA evidence that was unreliable by all relevant measures. Everything in the record points to the conclusion that there was more than a "reasonable likelihood" this evidence "affected the judgment of the jury," and therefore that Mr. Escobar's right to due process was violated. *United States v. Agurs*, 427 U.S. 97, 103 (1976). The CCA's contrary conclusion is unsupportable on these facts, and ignores the power DNA evidence has on jurors—as stated explicitly by one juror in this case. And in a rare concession of error, the State itself admits the false DNA evidence was material to Mr. Escobar's conviction.

A. Misuse and misunderstanding of DNA evidence has been shown to lead to wrongful convictions.

1. DNA testing has "emerged as the gold standard for forensic evidence." Joel D. Lieberman, et al., *Gold Versus Platinum: Do Jurors Recognize the Superiority and Limitations of DNA Evidence Compared to Other Types of Forensic Evidence?*, 14 Psychol. Pub. Pol'y & L. 27, 52 (2008) (Lieberman). And not without reason—used properly, it offers powerful evidence of guilt or innocence.

For example, DNA testing "has become essential in solving cold cases" other forensic techniques cannot crack. Al Baker, *Indicting DNA Profiles Is Vital in Old Rape Cases*, N.Y. Times (Oct. 18, 2009), https://www.nytimes.com/2009/10/19/nyregion/19dna.html. Facing the statute-of-limitations deadline in unsolved crimes, prosecutors have "devised the novel strategy of indicting the [perpetrator's] DNA" in scores of cases, and have ultimately established links to specific defendants and obtained numerous convictions through

DNA testing. *Id.* Likewise, DNA has played a decisive role exonerating wrongfully convicted defendants. According to the Innocence Project, one of the Network's member organizations, DNA evidence has been responsible for some 375 post-conviction exonerations since 1989. Innocence Project, *DNA Exonerations in the United States*, https://innocenceproject.org/dna-exonerations-in-the-united-states/. Twenty-one of those wrongfully convicted defendants were on death row. *Id.*

Given the decisive impact it can have in proving guilt or innocence in important cases, it is no surprise that DNA evidence carries significant weight with jurors. But there are concerning signs that, in this context, rational trust sometimes gives way to blind faith. Many have observed that DNA testing is "often assumed" by jurors "to have a special aura of certainty and mystic infallibility." Lieberman, *supra*, at 52. That aura reflects not just real results from high-profile cases in the news, but also the fact that DNA forensics have "become popularized in television crime dramas." *Id.* Those popular shows "portray[] forensic science as a sort of high-tech magic, solving crimes very quickly, and seemingly without error"—indeed, so exaggerated are these representations that one forensic scientist "estimates that 40% of the forensic 'science' depicted [in a representative television program] does not exist, and even when the techniques are real, they are performed with an accuracy that crime lab personnel can only dream of." Michael Johnson, *The "CSI Effect": TV Crime Dramas' Impact on Justice*, 15 Cardozo Pub. L. Pol'y & Ethics J. 385, 386 (2017). As a result, commentators fear that jurors have such an unrealistic view of DNA forensics that they are both more inclined to acquit when DNA evidence is *not* introduced, and are also more inclined to convict when it *is* introduced, regard-

less of the evidence's quality. *Id.* at 386-88.

Research increasingly suggests those concerns have an empirical foundation. One study has found that "jurors, on average, rated DNA evidence as 95% accurate, and [DNA evidence] was rated as 94% persuasive of a suspect's guilt." Lieberman, *supra*, at 52-53. Moreover, there is evidence that jurors do not lose their almost complete confidence in DNA testing even when it is shown to be unreliable. *Id.* at 45. "For example, research has demonstrated that providing jurors with numbers reflective of laboratory error rates has had little or no effect on their eventual judgments." *Id.* Another study found that even after they are exposed to "damaging cross-examination testimony and jury instructions detailing how to prudently use scientific evidence testimony, jurors were still more likely to convict when DNA evidence existed compared to [virtually all] other types of evidence." *Id.* at 44.

The upshot is that DNA evidence may be not only "the most powerful" form of forensic evidence yet developed, but also "the most troubling." Lieberman, *supra*, at 33 (citation omitted). As commentators and courts around the country have noted with concern, because "the persuasiveness of DNA evidence is so great," when it "is introduced against an accused at trial, the prosecutor's case can take on an aura of invincibility." *People v. Wright*, 25 N.Y.3d 769, 783 (2015) (citation omitted).[3]

2. The aura of invincibility DNA evidence lends to

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[3] *See also, e.g.*, *United States v. Bonds*, 12 F.3d 540, 567-68 (6th Cir. 1993) (similar); *State v. Phillips*, 430 S.C. 319, 329 (2020) (similar); *Whack v. State*, 433 Md. 728, 732 (2013) (similar); *State v. Pappas*, 256 Conn. 854, 889 (2001) (similar); *Commonwealth v. Curnin*, 409 Mass. 218, 219 (1991) (similar).

the prosecution's case is highly problematic, for the simple reason that DNA evidence of course is *not* infallible and can easily be misused.

Start with the fact that DNA "evidence is susceptible to the same problems [as] other" forensic evidence—issues like "chain of custody" gaps, "contamination," and "mix-up of samples." Lieberman, *supra*, at 52. And there is no question that forensic science compromised by these kinds of errors causes wrongful convictions. Ironically, the best proof comes from DNA exoneration cases. One study concluded that, in 86 DNA exoneration cases surveyed, "forensic science testing errors were the second leading cause of wrongful convictions (found in 63% of cases), falling behind only eyewitness misidentifications (71% of the cases)." *Id.* at 30.

There are additional problems specific to DNA testing. Even compared to other forensics, DNA evidence is highly complex and entails difficult interpretive work. "In fact, two different analysts at different labs may draw different conclusions" from the same DNA sample. Kimberly Cogdell Boies, *Misuse of DNA Evidence Is Not Always a Harmless Error: DNA Evidence, Prosecutorial Misconduct, and Wrongful Conviction*, 17 Tex. Wesleyan L. Rev. 403, 409 (2011) (Boies). There is therefore a significant "margin for error." *Id.* That margin becomes larger when the analysis concerns "DNA mixtures," where the sample contains the DNA of multiple persons. *See generally* Rich Press, *DNA Mixtures: A Forensic Science Explainer*, National Institute of Standards and Technology (Apr. 3, 2019), https://www.nist.gov/feature-stories/dna-mixtures-forensic-science-explainer; *see also, e.g.*, Pet. App. 85a-86a. Jurors appear largely unaware of these interpretative challenges and the concomitant risks of error. Boies, *supra*, at

409.

Add to this the reality that, even where the underlying analysis is sound, misinterpretation of DNA analysis can vastly inflate perception of guilt. The classic example of this is the "prosecutor's fallacy," which, as this Court has explained, occurs when evidence showing that the "probability a member of the general population would share the same DNA is 1 in 10,000 (random match probability)" is confused with the proposition that "there is only a 1 in 10,000 chance that someone other than the defendant is the source of the DNA found at the crime scene." *McDaniel*, 558 U.S. at 128. That then prompts a potential "further error" of "equat[ing] source probability with probability of guilt, unless there is no explanation other than guilt for a person to be the source of crime-scene DNA," and which "may result in an erroneous statement that, based on a random match probability of 1 in 10,000, there is a 0.01% chance the defendant is innocent or a 99.99% chance the defendant is guilty." *Id*.

While the risk of wrongful conviction from misinterpretation of DNA analysis is significant, the danger posed by outright manipulation of the analysis is yet more serious. And there is widespread evidence of intentional misconduct in the labs used by police and prosecutors to analyze DNA. There are many "documented cases of crime lab fraud" in recent history, including "national reports of widespread allegations of fraud at the FBI crime lab, shoddy practices, and false reports by forensic scientists at various state crime labs." Lieberman, *supra*, at 31-32, 45. That fraud can raise systemic questions tainting large numbers of convictions secured through DNA evidence.

Equally significant, and perhaps even more wide-

spread, is the problem of biased analysis arising from the relationship between forensics labs and the government. *Id.* at 45. Best practices, such as those promulgated by the National Commission on Forensic Science, require that lab technicians "should rely solely on task-relevant information when performing forensic analyses." Nat'l Comm'n on Forensic Sci., *Views of the Commission Ensuring that Forensic Analysis Is Based Upon Task-Relevant Information* 1 (Dec. 8, 2015), https://www.justice.gov/archives/ncfs/file/818196/download. Despite this, "many forensic labs receive transmittal letters with each sample submitted to the lab detailing the investigator's version of the crime, assuming the suspect is guilty, and implying that the scientist merely needs to confirm what the detective already knows." Lieberman, *supra*, at 45. This practice can lead to subtly harmful "observer effects," in which lab analysts' knowledge of the prosecution's theory of the case improperly affects their analysis, consciously or not. *Id.*

Accordingly, misuse of DNA analysis poses a significant risk to the integrity of criminal trials. A growing body of evidence shows that jurors' confidence in DNA testing often slips into blind faith. And for all the advances it has brought to criminal forensics, DNA testing simply does not justify that kind of automatic deference. This Court has therefore correctly stressed the overriding importance that DNA evidence "be presented in a fair and reliable manner." *McDaniel*, 558 U.S. at 136.

B. The DNA evidence the jury relied on to convict Mr. Escobar was wholly unreliable.

Few cases so vividly illustrate the prejudicial effect of false DNA evidence as this one. The case against Mr.

Escobar presented to the jury was founded on testimony about purportedly incriminating DNA testing, much of it mixture (or multiple-contributor) DNA evidence: testimony that the murder victim "could not be excluded as a contributor" to DNA collected from a pair of shoes and jeans belonging to Mr. Escobar, and from the car he was driving the day of the murder; and testimony that Mr. Escobar "could not be excluded as a contributor to" DNA samples from the crime scene. Pet. App. 18a-19a. That DNA evidence turned out to be false. As even a brief review of the record shows, virtually *all* the perils of misused DNA evidence described above—juror overreliance, biased-driven analysis, mishandling of evidence, and misinterpretation of testing—manifested here.

1. Begin with the fact that the DNA evidence was analyzed and testified to by a crime lab so untrustworthy that it was permanently shuttered.

Specifically, after Mr. Escobar's conviction and denial of his first state habeas petition, the Austin Police Department (APD) DNA lab, which analyzed the DNA in his case, was audited. Pet. App. 43a. The audit was initiated because of significant concerns around the APD Lab's handling of DNA mixtures, *id.*—the kind of multiple-person DNA evidence that is especially difficult to interpret even in proper conditions, *see* p. 8., *supra*, and which characterized several of the samples at issue in this case, *e.g.*, Pet. App. 3a.

The audit revealed a shocking range of lapses in standard practice. The lab's work was shot through with evidence of the "observer effects" commentators have warned result from too close a relationship between crime labs and the prosecution. *See* p. 10, *supra*. Analysts from the APD lab, including the analysts as-

signed to this case, repeatedly engaged in "suspect and victim-driven bias," gearing their work to meet the police and prosecution's preferred version of the facts. Pet. App. 46a-48a. Analysts also "lacked understanding about the importance of quality assurance procedures," and "the lab's 'cavalier attitude about the practice of performing forensic analyses'" caused "serious contamination events." Pet. App. 50a-52a. Worse still, management of the lab "did not have the scientific and technical knowledge necessary" to correct these errors, and analysts broadcast "an inability or unwillingness to adhere to best practices in DNA analysis." Pet. App. 52a-53a, 57a.

Because the audit revealed widespread evidence that the APD lab's work fell below basic scientific standards, the lab was stripped of its accreditation and closed. Pet. App. 54a. The problems in the lab's culture ultimately proved incurable—analysts (including, again, the same analysts who worked on this case) "were unwilling to accept responsibility for their errors and embrace best practices." Pet. App. 55a-56a. Even more past violations surfaced over time: for instance, a "[f]reezer malfunction" that an analyst who worked on this case tried to "keep … secret," and attempts to improperly "squeeze data out of samples that otherwise might not have been interpretable." Pet. App. 58a-61a (quotation marks omitted).

2. The systemic nature of these violations alone is enough to throw the reliability of the DNA evidence used against Mr. Escobar into serious doubt. But there is more. The record is clear that the APD lab's handling of Mr. Escobar's case was in fact infected throughout by error and misconduct.

The observer effects that tainted the APD Lab's

work generally manifested here. Evidence showed "that APD's testing strategy was influenced by irrelevant case information, including the prosecution's unproven theory of guilt." Pet. App. 48a-49a. The Technical Leader of the APD DNA lab ordered "additional testing" after "APD was unable to locate [Mr. Escobar's] DNA on any crime scene evidence." Pet. App. 48a-49a. The Leader ordered this testing based on her own strongly held belief that Mr. Escobar was guilty of "really a very brutal murder of a completely innocent victim." *Id*. Having been effectively told by a supervisor that Mr. Escobar was guilty, one analyst reverse-engineered the DNA testing to produce incriminating results. Pet. App. 47a-48a. An analyst from Fairfax Identity Laboratories, an external lab that performed further testing of the DNA, was also improperly exposed to the prosecution's theory of the case. Pet. App. 98a-99a. As the habeas court observed, this misconduct was a flagrant violation of the National Commission on Forensic Science's guidelines on limiting forensic analysts to task-relevant information to minimize the possibility of bias. Pet. App. 49a; *see also* p. 10, *supra*.

The APD lab's long track record of contaminating and mishandling evidence was also on display. An employee who collected crime-scene evidence "failed to comply with important protocols specifically designed to prevent cross-contamination between evidence." Pet. App. 76a. In addition, "seals on multiple evidence packages may have been compromised, further increasing the risk of error and diminishing confidence in the overall results." Pet. App. 115a. An APD Lab analyst also "violated best practices—established since at least the mid-1990s—dictating that crime scene samples should not be placed next to" and analyzed in tandem with "person-of-interest samples" because it drastically

increases the risk of contamination. Pet. App. 115a-116a. This misconduct affected all the DNA evidence in the case, as "[e]ven the samples that were not initially tested by the APD DNA Lab … were initially collected, processed, and stored by APD prior to being sent to Fairfax," the external lab. Pet. App. 118a. And the Fairfax analyst assigned to this case engaged in yet more mishandling of the evidence, by "misplac[ing]" samples and then only rerunning select portions of the analysis—rather than all the testing—as well as failing to "perform a root cause analysis or generate a corrective action report." Pet. App. 100a.

Finally, even setting aside these fundamental contamination concerns, there was significant evidence that both the APD lab and the Fairfax lab misinterpreted their own testing. A number of the "inclusion/exclusion" calculations performed by the APD lab—that is, a calculation of the "percentage of the random population that can be included or excluded as possible contributors to a DNA mixture," Pet. App. 32a—were "not scientifically supportable," Pet. App. 90a, 92a. Further, the Fairfax lab "had not completed any validation studies for mixtures of three or more individuals," which meant that "analysts were essentially using practices which were not scientifically sound to reach their conclusion[s]" in mixture analysis like the kind at issue here. Pet. App. 93a.

3. The habeas court documented all of these deficiencies in a 178-page set of findings. The only reasonable conclusion from those findings is the one the habeas court (and, ultimately, the prosecution) drew: "all of the DNA evidence relied on by the State at trial would have either been excluded or subject to a strong reliability challenge." Pet App. 125a. And because "the DNA

evidence was likely what tipped the scales in the State's favor," "the State would not have been able to obtain a conviction without" it, so this unreliable evidence was necessarily material. Pet. App. 127a, 129a.

The prosecution made it clear that the DNA evidence "was the linchpin" of its case, by "repeatedly emphasiz[ing] the importance of the DNA evidence throughout the trial proceedings." Pet. App. 126a. Accordingly, given the overwhelming power of DNA evidence with juries, *see* Part I.A.1, *supra*, it would be safe to conclude the mishandling of DNA evidence in this case was material to the verdict, even without direct evidence of its influence on jurors' deliberations.

But no such inference is necessary here, because this is one of the rare cases in which there is express evidence of juror impact. In response to a question from the prosecution at an evidentiary hearing in open court, a juror in the case stated: "I was sitting on the fence … as to whether [Mr. Escobar] was guilty or not guilty up to when the DNA evidence was submitted to the jury, and for me, that was the sealing factor." Pet. App. 127a.

Ultimately, the case for habeas relief was so strong that, by the time the case reached the CCA, the State itself conceded error and agreed with the habeas court that there was a reasonable likelihood that Mr. Escobar would not have been convicted absent the use of unreliable DNA evidence. Pet. App. 201a, 212a.

In the face of all this, the CCA's conclusion that Mr. Escobar had not shown that the DNA evidence was material to his conviction cannot be squared with the law or basic principles of justice. The court showed no sensitivity to the widespread consensus that, given its un-

precedented influence on jurors, unreliable DNA evidence is tremendously prejudicial. Likewise, the CCA failed to engage with the habeas court's meticulous fact-finding about the unreliability of the DNA testing in this case and the prejudice flowing from it. And the CCA nowhere acknowledged the State's own confession of error—even after the *State itself* requested reconsideration of the CCA's denial of the writ. See Pet. App. 189a, 192a-196a.

Instead, the CCA seems to have reasoned—in conflict with the State's own view—that some of the DNA testing *must* have been reliable, because it had been "recalculated" and still produced purportedly incriminating results. Pet. App. 6a. But as Mr. Escobar explains in his petition, that conclusion does not follow, because the prior mishandling of the evidence by the APD lab rendered any subsequent recalculation of it necessarily unreliable. Pet. 25, 29-30. Simply put, there was no rational basis for the CCA's conclusion that Mr. Escobar had failed to demonstrate that the false DNA evidence introduced against him at trial was material to his conviction.

* * *

To summarize, it would be difficult to imagine a starker example of the prejudicial effect of improper DNA testing than this case. The DNA evidence here was wholly unreliable and was obviously material to the jury's verdict, which resulted in a sentence of death. In reaching the opposite conclusion, the CCA "egregiously misapplied settled law." *Wearry v. Cain*, 577 U.S. 385, 395 (2016) (per curiam). The Court should summarily reverse that obviously erroneous decision. And in doing so, the Court should reiterate that it is fundamentally "important that [DNA testing] be pre-

sented in a fair and reliable manner" in criminal trials. *McDaniel*, 558 U.S. at 136.

II. The shoe-print and latent-fingerprint evidence introduced against Mr. Escobar was also unreliable.

The CCA also purported to support denial of habeas relief on the basis that "other evidence" beyond the false DNA testing incriminated Mr. Escobar. Pet. App. 6a. That is wrong. As discussed above, DNA evidence is overwhelmingly likely to be dispositive in jurors' eyes, and one juror testified, under oath, that the DNA evidence *was* dispositive in this case.

Moreover, the likelihood that the DNA evidence was dispositive is particularly high given the weakness of the other evidence offered against Mr. Escobar. Chief among the other evidence the CCA pointed to were two other pieces of forensic evidence: testimony that a shoe print found at the crime scene lined up with the tread design of one of Mr. Escobar's shoes, and a latent fingerprint that was a supposed "match" for Mr. Escobar. Both types of evidence were unreliable, as a general matter and on the facts of this case. And there was nothing else that could remotely support the verdict.

1. As to the shoe-print evidence, the testimony the prosecution offered was that a shoe seized from Mr. Escobar "had a similar tread design to an impression left in blood" at the crime scene. Pet. App. 18a. To the extent the testimony was meant to suggest there was some sort of *individual* correspondence between Mr. Escobar's shoe and the shoe print at the crime scene, that was both misleading and unsupported by science.

Comparison of footwear to crime-scene impressions typically involves two steps. First, analysts examine

so-called "class characteristics"—qualities found in whole sets of shoes, "such as design, physical size, and general wear"—and then proceed to evaluate "identifying characteristics," or qualities unique to a given shoe, "such as marks on a shoe caused by cuts, nicks, and gouges in the course of use." *See* President's Council of Advisors on Science and Technology, *Forensic Science in Criminal Cases: Ensuring Scientific Validity of Feature-Comparison Methods* 12 (Sept. 2016), https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/PCAST/pcast_forensic_science_report_final.pdf (PCAST Report). As the relevant literature explains, however, the problem is that if determining class characteristics is "not inherently a challenging measurement problem," analyzing identifying characteristics "lack[s] scientific foundation," because it "rel[ies] on recollections and guesses" and is "unsupported by any meaningful evidence." *Id.* at 115-17.

Unsurprisingly, given its lack of scientific foundation, testimony about purported identifying characteristics in shoe-print evidence has repeatedly led to wrongful convictions. Take the example of Charles Fain. In Fain's trial, an FBI analyst testified it was "possible" Fain's shoe made a certain impression at the crime scene and that wear patterns indicated the perpetrator and Fain walked with the same gait. Brandon L. Garrett & Peter J. Neufeld, *Invalid Forensic Science Testimony and Wrongful Convictions*, 95 Va. L. Rev. 1, 71-72 (2009). The jury relied on this unscientific evidence to convict Fain, who "served nearly 18 years on death row for a murder and rape he didn't commit" until later DNA testing proved his innocence. Innocence Project, *Charles Irvin Fain*, https://innocenceproject.org/cases/charles-irvin-fain/.

Accordingly, the most the shoe-print evidence in this case could have shown with any scientific reliability was that there were shared *class characteristics* between Mr. Escobar's shoe and the tread pattern—in other words, that they both belonged to some larger category of tread design. But shared class characteristics do not produce any measurable probability that a given shoe matches a given shoe print, "because accurate information is lacking regarding the exact number of shoes produced in a particular design, size, and geographic distribution, as well as how many shoes of that design and size remain in use." Michael B. Smith, *The Forensic Analysis of Footwear Impression Evidence*, 11 Forensic Sci. Commc'ns no. 3 (2009), https://archives.fbi.gov/archives/about-us/lab/forensic-science-communications/fsc/july2009/review. And as the habeas court noted, the "tread design" common to the shoe print and Mr. Escobar's shoe was "shared by thousands of other shoes in the Austin area." Pet. App. 128a. The shoe print analysis was therefore nothing close to incriminating evidence.

2. Neither was the latent-fingerprint analysis.

As with shoe prints, latent fingerprints offer evidence of limited scientific reliability. To start with, latent fingerprints are almost by definition low-quality forensic evidence. Whereas "known prints" ("fingerprints deliberately collected under a controlled setting from known subjects") are usually "of high quality" and so "can be searched automatically and reliably against large databases," latent fingerprints ("a complete or partial friction-ridge impression from an unknown subject") "are often incomplete and of variable quality." PCAST Report, *supra*, at 88. And while latent-fingerprint analysis was "hailed as infallible" for over a

century, until recently it had never been subjected to "appropriate studies to assess its error rate," meaning that "validity was assumed rather than proven." *Id.* at 87. In fact, it was only after a series of high-profile misidentifications in recent decades that authorities began scrutinizing the highly variable and "subjective" methods employed in latent-fingerprint analysis. *Id.* at 90, 103; *see also* Tamara F. Lawson, *Can Fingerprints Lie?: Re-weighing Fingerprint Evidence in Criminal Jury Trials*, 31 Am. J. Crim. L. 1, 46 (2003) (emphasizing that "latent fingerprint identification is a *subjective* decision of the examiner").

Even now, only a handful of the rigorous studies necessary to test the validity of latent fingerprinting have been undertaken, and they suggest that previous confidence in it was wildly excessive. The studies that have been completed have produced "false positive rates" (anywhere from 0.3% to over 5.0%) that were "*much higher* than the general public (and, by extension, most jurors) would likely believe based on longstanding claims about the accuracy of fingerprint analysis." PCAST Report, *supra*, at 95-96. Faced with this initial data, the President's Council of Advisors on Science and Technology has cautioned that latent-fingerprint analysis can be validly applied *only* where a number of factors are met, including that the analyst not be exposed to task-irrelevant information, and that the quality of the latent print being analyzed is comparable to foundational studies. *Id.* at 149. Even then, claims of certain identification between a latent fingerprint and a suspect "are not warranted or scientifically justified." *Id*.

The latent-fingerprint analysis introduced against Mr. Escobar flunks this standard. As the habeas court

noted, this evidence, much like the DNA testing, was "admitted under circumstances suggestive of suspect-driven bias." Pet. App. 128a. The prosecution originally presented testimony that "there were no positive results for the latent prints found in [the victim]'s apartment." Pet. App. 19a-20a. Only later, in the middle of trial, did APD's analyst "decide[] to re-examine" the evidence and change her mind. Pet. App. 19a-20a. The circumstances surrounding this about-face become even more concerning when one considers that the supposedly incriminating fingerprint was a "'low quality' latent print," and that the analyst expressed her new evaluation with an unqualified assertion that the print was "a 'match'" for Mr. Escobar. Pet. App. 19a-20a. As the scholarship explains:

> Declaring a match—understood to mean that the suspect was likely the source of the patterns found in the evidence—requires reference to valid population databases in order to determine the uniqueness of the patterns found and the statistical chances of a random match to those patterns. But, apart from DNA testing, none of the so-called forensic sciences have laid the scientific groundwork to permit such analysis or conclusions.

Keith A. Findley, *Judicial Gatekeeping of Suspect Evidence: Due Process and Evidentiary Rules in the Age of Innocence*, 47 Ga. L. Rev. 723, 770 n.175 (2013). Accordingly, there was no sound basis for the assertion that the latent print found at the crime scene was a "match" for Mr. Escobar.

3. Nothing else remotely supported the jury's verdict. The only other forensic evidence on which the

CCA relied was testimony that, the morning of the murder, Mr. Escobar's "cell phone signal was bouncing off two cell towers on either side" of the apartment complex where the murder occurred. Pet. App. 6a-7a, 18a. As Mr. Escobar's petition and the habeas opinion explain, that phone-signal data was missing crucial information that made it impossible to draw any valid inference regarding Mr. Escobar's location. Pet. 31, Pet. App. 128a, 178a-179a. Moreover, Mr. Escobar lived in that same apartment complex. Thus, establishing his presence there that morning would hardly be inculpatory at all.

Beyond that, all that was left of the prosecution's case was testimony from Mr. Escobar's ex-girlfriend that the defense had shown to be wildly inconsistent from her pre-trial statements, and circumstantial evidence regarding Mr. Escobar's appearance on the morning of the murder—evidence that could not have sustained a guilty verdict. Pet. 8-9; Pet. App. 128a-129a.

* * *

Given the extraordinary persuasiveness of DNA analysis with juries generally and its centrality to this case in particular, there was already a reasonable probability that the false DNA testing was material to Mr. Escobar's conviction. When one considers that the other forensic evidence offered against him was equally untrustworthy, that reasonable probability becomes a virtual certainty. The habeas court and the State agree. Under these circumstances, a criminal conviction cannot stand, much less one resulting in a death sentence. Mr. Escobar is entitled to a new trial, and the CCA's refusal to grant habeas relief was both legally erroneous and profoundly unjust. This Court should step in and summarily reverse, or it should order mer-

its briefing and set the case for argument.

CONCLUSION

The petition for certiorari should be granted.

Respectfully submitted.

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APPENDIX

Member Organizations of the Innocence Network for Amicus Brief Purposes

Actual Innocence Clinic at the University of Texas School of Law

After Innocence

Alaska Innocence Project

Arizona Justice Project

Boston College Innocence Program

California Innocence Project

Center on Wrongful Convictions

Committee for Public Counsel Services Innocence Program

Connecticut Innocence Project

Duke Law Center for Criminal Justice and Professional Responsibility

Exoneration Project

George C. Cochran Innocence Project at the University of Mississippi School of Law

Georgia Innocence Project

Hawai'i Innocence Project

Idaho Innocence Project

Illinois Innocence Project

Indiana University McKinney Wrongful Conviction Clinic

Innocence Delaware, Inc.

Innocence Project

Innocence Project Argentina

Innocence Project at the University of Virginia School of Law

Innocence Project Brasil

Innocence Project London

Innocence Project New Orleans

Innocence Project of Florida

Innocence Project of Texas

Italy Innocence Project

Justicia Reinvindicada Puerto Rico Innocence Project

Korey Wise Innocence Project

Loyola Law School Project for the Innocent

Manchester Innocence Project

Michigan Innocence Clinic

Mid-Atlantic Innocence Project

Midwest Innocence Project

Montana Innocence Project

New England Innocence Project

New York Law School Post-Conviction Innocence Clinic

North Carolina Center on Actual Innocence

Northern California Innocence Project

Office of the Ohio Public Defender Wrongful Conviction Project

Ohio Innocence Project

Oklahoma Innocence Project

Oregon Innocence Project

Osgoode Hall Innocence Project

Rocky Mountain Innocence Center

Taiwan Innocence Project

Thurgood Marshall School of Law Innocence Project

University of Arizona Innocence Project

University of Baltimore Innocence Project Clinic

University of British Columbia Innocence Project at the Allard School of Law

University of Miami Law Innocence Clinic

Wake Forest University School of Law Innocence and Justice Clinic

Washington Innocence Project

West Virginia Innocence Project

Wisconsin Innocence Project

Witness to Innocence