State of New Jersey,

Plaintiff-Petitioner,

vs.

Darryl Nieves,

Defendant-Respondent.

SUPERIOR COURT OF NEW JERSEY
APPELLATE DIVISION
DOCKET NO. A-002069-21T4

CRIMINAL ACTION

On Appeal from an Order of the Superior Court of New Jersey, Middlesex County, Docket No. Below: MID-17-000837

BRIEF on behalf of The INNOCENCE NETWORK AND CENTER FOR INTEGRITY IN FORENSIC SCIENCES in support of petition to participate as *AMICUS CURIAE*

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INTERESTS OF *AMICI CURIAE*

The Innocence Network ("the Network") is an association of independent organizations dedicated to providing pro bono legal and/or investigative services to prisoners for whom evidence discovered post-conviction can provide conclusive proof of innocence. The 69 current members of the Network represent hundreds of prisoners with innocence claims in 50 states, the District of Columbia, and Puerto Rico, as well as Australia, Argentina, Brazil, Canada, Ireland, Israel, Italy, the Netherlands, the United Kingdom, and Taiwan.[1] The Network and its members are

[1] The member organizations for amicus brief purposes include 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; Connecticut Innocence Project/Post-Conviction Unit; Duke Center for Criminal Justice and Professional Responsibility; Exoneration Initiative; 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; Innocence Project; Innocence Project Argentina; Innocence Project at 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; 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

also dedicated to improving the accuracy and reliability of the criminal justice system in future cases. Drawing on the lessons from cases in which the system 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.

Significantly, the work of the Network affiliates has demonstrated the threat to the truth-seeking function of criminal trials posed by unreliable or exaggerated forensic evidence. Nearly 52% of the individuals exonerated by post-conviction DNA testing were convicted based at least in part on expert forensic evidence that turned out to be wrong.[2] As a result, to increase the integrity of convictions and reduce the risk of an innocent person being found guilty, the Network urges courts

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Defender, Wrongful Conviction Project; Ohio Innocence Project; Oklahoma Innocence Project; Oregon Innocence Project; Osgoode Hall Innocence Project; Proyecto Inocencia de Puerto Rico; Rocky Mountain Innocence Center; Taiwan Innocence Project; Thurgood Marshall School of Law Innocence Project; University of Arizona Innocence Project; University of British Columbia Innocence Project at the Allard School of Law; University of Miami Law Innocence Clinic; Wake Forest University Law School Innocence and Justice Clinic; Washington Innocence Project; West Virginia Innocence Project; and Wisconsin Innocence Project.

[2] See Innocence Project, Overturning Wrongful Convictions Involving Misapplied Forensics, https://www.innocenceproject.org/overturning-wrongful-convictions-involving-flawed-forensics/.

to act as robust gatekeepers and ensure that expert forensic evidence is admitted at trial only when it has strong scientific support — particularly in the form of well-designed empirical studies.

The Center for Integrity in Forensic Sciences ("CIFS") is a nonprofit organization focused on bringing together distinguished academic scientists and legal professionals to collaborate on strengthening the accuracy and reliability of forensic science in the courtroom. In particular, CIFS engages in strategic litigation, either through direct representation, case consultation, or amicus brief support, in cases that raise serious concerns about forensic science testimony.[3]

The issue before this Court is whether the State's method for diagnosing Abusive Head Trauma ("AHT") is sufficiently reliable to be admitted as expert evidence of abuse. The Innocence Network and CIFS (together, "*Amici*") seek to provide input to assist the Court with its solemn responsibility to evaluate whether the State's use of such flawed "expert" evidence runs afoul of Frye v. United States, 293 F. 1013 (D.C. Cir. 1923), the standard for admissibility of expert evidence in criminal prosecutions in New Jersey.

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[3] See Center for Integrity in Forensic Sciences, About CIFS, https://cifsjustice.org/about-cifs/excluding-unreliable-techniques/.

PRELIMINARY STATEMENT

Scientific understanding is dynamic and ever-changing. New Jersey courts—more than many—have evinced a keen understanding of this reality and, congruently, the importance of examining their gatekeeping function by remaining laser-focused not on decades-old precedent for admitting expert testimony on any particular subject, but rather, as required by Frye v. United States, 293 F. 1013 (D.C. Cir. 1923), on the *current* state of scientific acceptance.

Though some courts admitted such evidence in the past, the current scientific consensus rejects a diagnosis, such as that offered by the State's expert here, of AHT predicated solely on the presence of the "triad" of symptoms. This consensus has been increasingly recognized by courts around the country—including the court below—that have undertaken the necessary examination of the current—rather than the stale—state of the science on this subject.

In making its determination to exclude the State's proffered expert evidence, the trial court did exactly what Frye requires: a fresh determination that, whatever the scientific understanding may have been in the past, *today's* consensus is that an AHT diagnosis in these circumstances is simply not supported by science.

The trial court properly exercised its gatekeeping function, and the importance of its determination cannot be overstated. It is well-understood that expert evidence

has a disproportionately strong impact on jurors and that where, as here, there is no demonstrated basis in science for an expert's opinion, sending it to the jury is simply too dangerous to the fair administration of justice. Indeed, the work of the Innocence Network, CIFS and other organizations has demonstrated that flawed forensic evidence has been a contributing factor in *more than half* of wrongful convictions. Other forms of repudiated science like hair microscopy and bite-mark "matching," for example, have led to numerous wrongful convictions and have finally been recognized by law enforcement, professional organizations, and—most importantly—courts, as too unreliable to be admitted as evidence. Similarly, courts throughout the country have recently overturned criminal convictions due to the growing discomfort over the scientific validity of the method for diagnosing AHT.

For all of these reasons, *Amici* respectfully submit this brief in support of their petition to appear as *Amici* in this case, and urge the Court to affirm the decision below and preclude the State's unreliable expert testimony.

STATEMENT OF FACTS AND PROCEDURAL HISTORY

Amici adopt and incorporate the statement of facts and procedural history as set forth in the brief submitted by Mr. Nieves.

LEGAL ARGUMENT

I. FOLLOWING CURRENT SCIENTIFIC UNDERSTANDING—RATHER THAN OUTDATED LEGAL PRECEDENT—THE COURT BELOW PROPERLY EXCLUDED THE STATE'S AHT EVIDENCE.

The Court should affirm the well-reasoned decision below because the trial court properly focused on *today's* scientific understanding, rather than stale legal precedent, to exclude the State's proffered testimony.

A. Current Scientific Consensus Does Not Support Diagnosis of AHT Based on Only the "Triad" of Medical Findings Commonly Associated with Shaking

It is now clear that science simply does not support a diagnosis of AHT based solely on the "triad" of findings historically associated with shaking.[4] So as to not reiterate arguments already well-presented before the Court, *Amici* adopt and incorporate the arguments as set forth in the brief submitted by Mr. Nieves as well

[4] Though some clinicians disagree about which medical findings comprise the "triad," the most common three findings referenced are subdural hematoma (bleeding within the coverings of the brain), retinal hemorrhage (bleeding in the back of the eye), and encephalopathy (brain dysfunction).

as in the *amicus* briefs offered by both the biomechanical and medical physician experts.

B. Where, as Here, Legal Precedent and Current Science Diverge, Courts Must Follow the Science or Risk Unjust Outcomes

Reliance on precedent alone, particularly when scientific evidence is unreliable or false, can lead to a "precedent paradox" in which ignoring scientific advancement in favor of precedent leads to an unjust and inaccurate result. Litigation around bite-mark matching illustrates this problem.

In Wisconsin, for example, bite-mark matching evidence was admitted in Robert Stinson's 1985 trial.[5] Stinson was convicted of a brutal rape and murder and sentenced to life in prison. He served 23 years before the Wisconsin Innocence Project uncovered DNA evidence that excluded him and implicated another individual. The bite-mark evidence was particularly egregious in this case because Stinson and the real biter did not even have the same number of teeth. Yet the State's experts claimed that the bite was unequivocally Stinson's, even though the evidence displayed what appeared to be a tooth mark where Stinson was missing a tooth. Although Stinson was exonerated, and although he later won a multi-million dollar

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[5] See The National Registry of Exonerations, Robert Lee Stinson, May 2, 2022, https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=3666.

settlement in his suit against the city of Milwaukee, the admissibility of bite-mark testimony itself was not disturbed. Troublingly, bite-mark matching remains admissible as evidence in Wisconsin because of the appellate decision that upheld Mr. Stinson's wrongful conviction. See generally State v. Stinson, 134 Wis.2d 224, Wis. App., October 28, 1986.

This pattern continues in other jurisdictions. Levon Brooks was exonerated in Mississippi in 2008.[6] Like Stinson, Brooks's case rested upon the testimony of bite-mark examiners. Furthermore, like Stinson, Brooks was exonerated with the use of DNA evidence that implicated another man. Like Stinson, Brooks's case still stands as precedent for allowing bite mark matching testimony in court, despite his demonstrated actual innocence.

While it is true that sound scientific practices may sometimes lead to incorrect results in light of human error and other issues, the examples of bite-mark matching and AHT stand out. This is because, in addition to documented incorrect results illustrated by exonerations, they lack the sound scientific underpinnings of reliable disciplines like nuclear DNA analysis. Generally, it is wholly appropriate to rest

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[6] See Alexandra Gross, The National Registry of Exonerations, Levon Brooks, October 3, 2021, https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=3058.

decisions upon precedent; however, it is not appropriate to do so when new scientific evidence undermines previous assumptions about a scientific discipline.

C. The Focus on Current Scientific Consensus Is Mandated by New Jersey's Frye Standard

The trial court's focus on current scientific consensus rather than legal precedent not only avoids the "precedent paradox," but it also precisely follows what is required by New Jersey law as articulated by the New Jersey Supreme Court. See State v. J.L.G., 234 N.J. 265, 280 (2018) ("In criminal cases, this Court has continued to rely on the Frye standard to assess reliability. The test requires trial judges to determine whether the science underlying the proposed expert testimony has gained general acceptance in the particular field in which it belongs.") (quoting with internal quotations omitted, Frye, 293 F. 1013, 1014 (D.C. Cir. 1923)).

Analysis of the scientific underpinnings of proposed expert testimony often requires courts to reexamine previously accepted methodologies in light of scientific shifts. Indeed, "[o]n several occasions, our Supreme Court has acknowledged and reexamined long standing scientific principles in light of new research, thus embracing that scientific and medical research is constantly changing." (Da004) State v. Jacoby, No. 15-11-0917-1, 2018 WL 5098763, *6 (N.J. Super. Law Div. Aug. 17, 2018); see also State v. Harvey, 151 N.J. 117, 167-168 (1997) ("In the

rapidly changing world of modern science, continuing research may affect the scientific community's acceptance of a novel technology. By reviewing post-trial publications, an appellate court can account for the rapid pace of new technology. The continuing review also recognizes that general acceptance may change between the time of trial and the time of appellate review.").

Like the trial court below, the New Jersey Supreme Court itself has eschewed legal precedent that sanctioned what was later understood to be unreliable expert evidence. For example, in State v. J.L.G., 234 N.J. 265 (2018), the Court reexamined the longstanding scientific principles supporting the diagnosis of Child Sexual Abuse Accommodations Syndrome ("CSAAS"). In that case, the accused was convicted of sexual assault and abuse charges and challenged the admissibility of the State's expert who testified about CSAAS to explain a child's delay or failure to report the abuse. The Court carefully considered the five behaviors that comprised the CSAAS "diagnosis" and evaluated the evidence for each to determine if they were sufficiently accepted in the scientific community to satisfy the Frye standard. Id. at 308.

Significant to this case, the Court undertook a detailed analysis of the scientific underpinnings of CSAAS, despite wide prior judicial approval of such testimony, including the Court's own previous ruling. In fact, 25 years before J.L.G.,

the Court itself found that CSAAS had a sufficiently reliable scientific basis to be presented to a jury in State v. J.Q., 130 N.J. 554, 556 (1993), and had not revisited that stance despite considering several cases involving CSAAS testimony between 2004 and 2011. J.L.G., 234 N.J. at 288. The Court also noted that forty other states and the District of Columbia permit CSAAS testimony for some purpose. Id. Nevertheless, the Court in J.L.G.—like the court below in this case—recognized the judicial obligation to revisit and reassess the scientific underpinning of the evidence. The Court recognized that the Frye hearing in that case—as in the proceedings below—"benefitted not only from the testimony of authoritative experts but also from scientific evidence that has developed in the more than twenty years since J.Q." Id. at 289.

Importantly, the Court emphasized that general acceptance hinges on empirical validation through well-designed scientific studies, rather than the anecdotal observations of clinicians. Id. at 291 ("[I]t is important to note that CSAAS stems from observations made in clinical practice – not systematic scientific study . . . . Clinical wisdom is valuable, but it must be examined with care and objectively tested."). After reviewing the literature, the Court concluded that "it does not appear that CSAAS's five-category theory has been tested and empirically validated as a whole." Id.

Application of the Court's analytical approach in J.L.G. to the facts of this case strongly supports the lower court's exclusion of the State's proffered AHT evidence. Like CSAAS, the AHT diagnosis rests on anecdotal clinical observations rather than empirically validated systematic scientific studies. Like the CSAAS criteria for diagnosis, which can also manifest in non-abused children, the "triad" is "neither precise nor specific to victims of . . . abuse." Id. at 302.

II. COURTS ACROSS THE COUNTRY ARE INCREASINGLY RECOGNIZING THAT THE AHT DIAGNOSIS IS NOT SUPPORTED BY SCIENCE.

A. The Only Other Court in NJ to Undertake a Comprehensive Review of the Science Similarly Concluded that the AHT Diagnosis Is No Longer Generally Accepted

The decision below is now the second New Jersey trial court to determine that the diagnostic methodology for diagnosing AHT is insufficiently reliable to be admitted as evidence of abuse.

In State v. Jacoby, the State relied upon the "triad" to diagnose AHT, but the Honorable Sohail Mojammed, J.S.C. ruled the methodology for diagnosis unreliable and inadmissible under the Frye standard. No. 15-11-0917-1, 2018 WL 5098763 (N.J. Super. Law Div. Aug. 17, 2018). The accused in Jacoby was alleged to have abused his infant son, and the Court looked to the State's basis for the diagnosis, that

the child suffered from subdural hematomas, retinal hemorrhages, and a "constellation" of the two. Id at *11-12.

In order to determine the reliability of the State's AHT diagnosis, the Jacoby court looked to each symptom in the triad to determine whether it was sufficiently precise and reliable to constitute evidence of abuse. Id. With regard to the first symptom, the presence of a subdural hematoma, the court found that while "some causes of subdural hematomas are known, others are not and subdural hematomas can re-bleed with little or no trauma." Id at *11. Relying upon expert testimony and scientific and medical literature, the court found the evidence to be insufficient to demonstrate abuse, because "there is no sufficiently reliable evidence and no general consensus in the scientific and medical community as to both the age and causation of subdural hematomas to satisfy the Frye standard. As such, subdural hematoma evidence in this case is not admissible." Id. at *12.

With regard to the second symptom, the presence of retinal hemorrhages, the Jacoby court was similarly reluctant to admit the evidence, where "the precise causation and age of retinal hemorrhages is also an inexact science." Id. The court noted that the "age and causation of retinal hemorrhages cannot precisely be determined, and thus "since it is not known exactly what causes retinal hemorrhages,

then retinal hemorrhages may not be pathognomonic of abusive injury." Id. As such, the court rendered evidence of retinal hemorrhages inadmissible. Id.

The court further excluded evidence of abuse based on a "constellation" of subdural hematoma and retinal hemorrhages because the "presence of subdural hematomas and retinal hemorrhages do not automatically give rise to a presumption of suspected abusive head trauma, particularly when there is no external evidence of trauma whatsoever and no evidence of brain injury." Id. The court ruled, "there is no sufficiently reliable evidence and no general consensus in the scientific and medical community that the presence of subdural hematomas and retinal hemorrhages should automatically lead to a presumption of abusive head trauma to satisfy the Frye standard." Id.

The trial court below, of course, reached a similar conclusion as the trial court in Jacoby. Each of these trial court judges independently recognized the inescapable reality that AHT diagnoses, without actual corroborating evidence of abuse, are simply unreliable. Accordingly, the State's attempt to present evidence of an AHT diagnosis based on an unreliable and imprecise methodology runs afoul of the Frye standard, breaks with recent precedent, and should not be admissible.

Meanwhile, the State's reliance upon State v. Compton, 304 N.J. Super. 477 (App. Div. 1997) as a demonstration of AHT's general acceptance in the scientific

community is unpersuasive. Compton was decided 25 years ago, 21 years before the trial court's decision in Jacoby and over 24 years before the trial court's decision in this case, each of which recognized the deficiencies in the State's manner of diagnosing AHT.

The State also erroneously relies on State v. Galloway, 133 N.J. 631 (1993) to contend that AHT was "implicitly" accepted by the New Jersey Supreme Court. While the State is correct that the Galloway Court did not examine the reliability of an AHT diagnosis, there was corroborating evidence in Galloway that the accused admitted to assaulting the child, stating that he "wanted to hurt the baby; that he knew that he was hurting the baby, that he shook the baby for thirty seconds to a minute while squeezing the child with all his might; and . . . that he had intended to do it all along . . ." Id. at 652. As such, Galloway does not stand for the proposition that AHT is implicitly accepted, but merely that the Court did not examine the reliability of an AHT diagnosis because the accused admitted to violently shaking and squeezing the victim with the intention of harming the child. Here, by contrast, there is no corroborating evidence whatsoever that Mr. Nieves either shook his child or intended in any way to harm his child – the only purported evidence is the State's faulty expert AHT diagnosis.

B. Recognition of the New Scientific Understanding of AHT Has Led to Numerous Reversals and Exonerations

The State's incomplete criteria for "diagnosing" AHT in this case is a relic of the scientific and medical past, and courts throughout the country have recognized the flaws in the methodology.

Just last year, in People v. Miller, the Michigan Court of Appeals affirmed a grant of a new trial in light of a "shift in science" regarding the reliability of AHT diagnoses. (Da024) No. 346321, 2021 WL 1326733, at *5 (Mich. Ct. App. Apr. 8, 2021). In Allison v. State, an Alaska appeals court vacated a conviction based on an AHT hypothesis where excluded evidence showed that the child's death could have resulted from natural causes. 448 P.3d 266, 275 (Alaska Ct. App. 2019). In Vanek v. Wofford, a California federal court granted habeas relief from a conviction based on an AHT diagnosis, and the court noted, "[t]he triad of signs and symptoms" do not necessarily indicate "violent shaking." (Da031), No. CV 14-4427-AG (KK), 2016 WL 6783340, at *10-11 (C.D. Cal. July 26, 2016) report and recommendation adopted, No. CV 14-4427-MWF (KK), 2016 WL 6781086 (C.D. Cal. Nov. 15, 2016). The court acknowledged that the child may have "suffered from a pre-existing medical condition that may have been present from birth." Id. And, in People v. Bailey, a New York trial court ordered a new trial for an accused convicted of abuse based on an AHT diagnosis, which was affirmed by the Supreme Court of

New York, Appellate Division, Fourth Department on appeal. The court acknowledged that "there has been a compelling and consequential shift in mainstream medical opinion . . . as to the causes of the types of trauma that [the child] exhibited," and ordered a new trial for a defendant convicted of abuse on the basis of an AHT diagnosis. 47 Misc. 33 355, 373 (N.Y. Co. Ct. 2014), affd, 41 N.Y.S. 3d 625 (App. Div. 4d Dep't 2016) see also Hanson v. Baker, 766 F. App'x 501, 504 (9th Cir. 2019); Ex Parte Henderson, 384 S.W.3d 833, 833–34 (Tex. Crim. App. 2012); Del Prete v. Thompson, 10 F. Supp. 3d 907, 957 n.10 (N.D. Ill. 2014); State v. Edmunds, 308 Wis. 2d 374, 391–92 (Wis. Ct. App. 2008)

Just as these other jurisdictions did, this Court should affirm the well-reasoned decision below, which exhaustively and meticulously detailed the State's failure to establish the scientific validity of the AHT diagnosis in this case.

III. THE COURT BELOW PROPERLY EXERCISED ITS GATEKEEPING FUNCTION—WHICH IS ESSENTIAL TO PREVENT WRONGFUL CONVICTIONS

Expert forensic evidence is a powerful tool in criminal prosecutions and the Court must act as a gatekeeper to preclude the introduction of faulty or unreliable scientific analysis. AHT diagnoses – like other similar forensic disciplines that have since been discredited – lead to wrongful convictions and the Court must act as the gatekeeper to preclude such prejudicial evidence from trial.

A. Forensic Evidence Is Uniquely Powerful in its Ability to Influence—and Potentially Mislead—Jurors and Factfinders.

"Expert evidence can be both powerful and quite misleading because of the difficulty in evaluating it." (Da051) Jack B. Weinstein, Rule 702 of the Federal Rules of Evidence Is Sound: It Should Not Be Amended, 138 F.R.D. 631, 632 (1991).

Indeed, the power of flawed forensics to mislead juries has been echoed by numerous scholars and studies. For example, studies have found that jurors give outsized weight to forensic evidence. See (Da065) Richard H. Underwood, Evaluating Scientific and Forensic Evidence, 24 Am. J. Trial Advoc. 149, 166 (2000); see also (Da114) Tom R. Tyler, Viewing CSI and the Threshold of Guilt: Managing Truth and Justice in Reality and Fiction, 115 Yale L.J. 1050, 1068 (2006) ("[W]idespread evidence . . . [indicates] people already overestimate the probative value of scientific evidence."). Indeed, as one study put it, "jurors in this country often accept state forensic testimony as if each prosecution expert witness is the NASA scientist who first put man on the moon." (Da151) Mark A. Godsey & Marie Alao, She Blinded Me with Science: Wrongful Convictions and the "Reverse CSI Effect", 17 Tex. Wesleyan L. Rev. 481, 495 (2011).

Similarly, studies show that jurors struggle to understand basic scientific concepts. "[R]esearch indicates that jurors often do not understand the fundamentals

of scientific evidence, and lack the ability to reason about statistical, probabilistic, and methodological issues effectively." (Da171) Keith A. Findley, Innocents at Risk: Adversary Imbalance, Forensic Science, and the Search for Truth, 38 Seton Hall L. Rev. 893, 948 (2008).

The Supreme Court (and many other courts) have similarly cautioned about the outsized influence of "scientific" evidence. See, e.g., Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 595 (1993) (explaining "[e]xpert evidence can be both powerful and quite misleading because of the difficulty in evaluating it"); United States v. Frazier, 387 F.3d 1244, 1263 (11th Cir. 2004) ("[E]xpert testimony may be assigned talismanic significance in the eyes of lay jurors."). Likewise, Maryland courts expressly cautioned that expert testimony can unduly shape jurors' perceptions in criminal trials. In Clemons v. State, 392 Md. 339 (2006), for example, the Court of Appeals warned: "[l]ay jurors tend to give considerable weight to 'scientific' evidence when presented by 'experts' with impressive credentials." Id. at 372 (alteration in original); see also Rochkind v. Stevenson, 471 Md. 1 (2020) (vacating conviction based upon forensic evidence that did not meet its revised admissibility criteria).

As such, the trial court's gatekeeping role is vital to prevent unreliable evidence from misleading the jury.

B. The Risk of Admitting Flawed Forensic Evidence Is Not Hypothetical—It Is a Leading Cause of Wrongful Conviction

As the United States Supreme Court has recognized, "serious deficiencies have been found in the forensic evidence used in criminal trials." Melendez-Diaz v. Massachusetts, 557 U.S. 305, 319 (2009). Indeed, a "study of cases in which exonerating evidence resulted in the overturning of criminal convictions concluded that invalid forensic testimony contributed to the convictions in 60% of the cases." Id. (internal citation omitted). The Court noted the likely cause, in the "wide variability across forensic science disciplines with regard to techniques, methodologies, reliability, types and numbers of potential errors, research, general acceptability, and published material." Id. at 320-321 (quoting National Research Council of the National Academies, Strengthening Forensic Science in the United States: A Path Forward 183 (2009)). For example, though admitted for decades, it is now understood that hair microscopy—that is the "matching" of hairs to each other—has no basis in science and has contributed to at least 74 wrongful

convictions.[7] Similarly, the shift in scientific understanding with regard to bite-mark evidence led to at least 30 exonerations.[8]

CONCLUSION

For the foregoing reasons, the Court should affirm the trial court order excluding expert evidence concerning the AHT diagnosis and affirm the dismissal of the indictment.

Respectfully submitted,

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Attorneys for Amici
The Innocence Network and the Center for Integrity in Forensic Sciences

By: *s/ Lance J. Kalik*
Lance J. Kalik

Date: December 12, 2022

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[7] See Kate Briquelet, The University of Mississippi School of Law, On Death Row for the Wrong Hair, April 24, 2015, https://innocenceproject.olemiss.edu/willie-jerome-manning-spends-two-decades-in-prison-over-faulty-hair-science/.

[8] See Innocence Project, Description of Bite Mark Exonerations, https://www.innocenceproject.org/wp-content/uploads/2020/04/Description-of-bite-mark-exonerations-and-statistical-analysis_UPDATED-04.09.2020.pdf.