STATE OF MICHIGAN
IN THE MICHIGAN SUPREME COURT

PEOPLE OF THE STATE OF MICHIGAN,
Plaintiff-Appellee,

-v-

MILTON LEE LEMONS,
Defendant-Appellant.

Supreme Court No. 163939
Court of Appeals No. 348277
Trial Court No. 06-004818-FC

DEFENDANT-APPELLANT'S SUPPLEMENTAL BRIEF

Michigan Innocence Clinic
University of Michigan Law School
David A. Moran (P45353)
Imran J. Syed (P75415)
Elizabeth J. Cole (PA Bar No. 327703)
Breezy Adams (Student Attorney)
Samuel Clougher (Student Attorney)
ATTORNEYS FOR DEFENDANT-APPELLANT
701 S. State Street
Ann Arbor, MI 48109
(734) 763-9353

TABLE OF CONTENTS

INDEX OF AUTHORITIES

Cases

Rules and Statutes

Other Authorities

STATEMENT OF QUESTIONS PRESENTED

I. **Did The Court of Appeals Err In Holding That The Circuit Court Did Not Abuse Its Discretion In Concluding That The Biomechanical Engineering Evidence and Testimony Was Inadmissible, Or In Excluding Alternative Causation Theories Upon A Flawed And Improper Determination That They Lacked Scientific Or Factual Support?**

The Court of Appeals answered: "No."

Defendant-Appellant answers: "Yes."

II. **Did The Court of Appeals Err in Upholding The Circuit Court's Denial Of Relief From Judgment, Where The Circuit Court Erroneously Excluded Defense Experts' Opinions Regarding The Validity Of SBS Diagnoses, Reliance On The Triad As A Diagnostic Tool, And The Possibility Of Choking As An Alternative Cause Of Death?**

The Court of Appeals answered: "No."

Defendant-Appellant answers: "Yes."

III. **Did The Court Of Appeals Err In Holding That The New Evidence Presented Is Insufficient To Create A Reasonable Probability Of A Different Outcome And Thus Warrant Relief Under *People v Cress*?**

The Court of Appeals answered: "No."

Defendant-Appellant answers: "Yes."

INTRODUCTION

In 2006, Defendant-Appellant Milton Lemons was convicted of first-degree murder for the death of her[1] infant daughter, Nakita, based on the theory that Nakita had died of Shaken Baby Syndrome (SBS).[2] At trial, the only medical expert to testify for either side as to cause of death was pathologist Dr. Bader Cassin, who concluded that Nakita had died of SBS.

During the 2017 evidentiary hearing on Ms. Lemons' motion for relief from judgment, Dr. Cassin retracted his medical opinion, testifying that he no longer stood by his SBS diagnosis and that he would no longer declare the death to be homicide. Further, Ms. Lemons presented five new expert witnesses at the 2017 hearing who agreed with Dr. Cassin that SBS diagnoses are often unreliable, that his original SBS diagnosis was wrong, and that Nakita most likely choked to death on formula. Indeed, multiple witnesses at trial confirmed that Nakita was aspirating formula before and after emergency responders arrived.

At the conclusion of the evidentiary hearing, the trial court issued an opinion denying relief and holding that: (1) this Court's unanimous decision in *People v Ackley*, 497 Mich 381; 870 NW2d 858 (2015), was not binding on the question of whether there is a substantial debate as to the reliability of SBS diagnoses; (2) Dr. Cassin's changed opinion was not credible (after treating it with the same skepticism accorded to lay recantations); and (3) SBS diagnoses are so reliable that all of Ms. Lemons' highly qualified new experts who challenged the SBS finding in this case would be excluded from testifying at a retrial under MRE 702.

The Court of Appeals agreed that the trial court had abused its discretion in rejecting Dr.

---

[1] Ms. Lemons identifies as a woman.

[2] SBS is discussed in more detail later in this brief, but in short, it is a medical hypothesis stating that an infant with certain symptoms in the brain is likely to have been violently and abusively shaken even if there are no other signs of abuse (such as broken bones, injury to the neck, bruising, etc.). As this Court recognized in *People v Ackley*, SBS is a deeply controversial diagnosis.

Cassin's changed opinion and in holding that all of Ms. Lemons' new medical expert testimony would be inadmissible at a retrial. However, the Court of Appeals concluded that the trial court was correct to exclude the testimony of a biomechanics expert because biomechanics relies on experiments conducted with biofidelic dummies and animals instead of living infants.

Despite ruling that the trial court had abused its discretion in rejecting Dr. Cassin's changed opinion and all of the new medical evidence challenging the SBS diagnosis, the Court of Appeals held that a new factfinder need not consider any of this new evidence. The Court of Appeals reasoned that Ms. Lemons' statement to the police, which was extracted after she was arrested and confronted with Dr. Cassin's original (now-retracted) diagnosis of SBS, trumped all of the scientific and medical evidence. In sum, the Court of Appeals concluded that a custodial statement taken from a grieving parent confronted with a supposedly infallible medical opinion is so powerful that a new jury need not hear all of the new scientific and medical evidence contradicting that statement, even when some of that new evidence strongly indicates that the statement could not be true.

Ms. Lemons accordingly asks this Court to reverse the Court of Appeals and order a new trial so that a jury may hear all of the evidence.

STATEMENT OF FACTS AND PROCEDURE

A. Nakita Lemons' Health Complications, Emergency Hospitalization, and Death

Nakita Lemons was born on July 24, 2005, to Milton and Lori Lemons. 23a. When she was one week old, Nakita experienced difficulty breathing shortly after being fed. 22a. She began gasping and her face "started to turn colors." *Id.* Lori used a bulb syringe to clear her airway and nose, and Nakita started breathing normally. *Id.*

Nakita had "another one of her episodes" at around five weeks old. 24a. Because this was the second time Nakita had visibly struggled with her breathing, her parents took her to a pediatrician. 23a, 24a. Nakita improved for several weeks, but she began "acting fussy" again on October 8 and remained fussy up to October 10. 27a, 33a. On that day, Lori left Nakita and Milton Lemons, Jr. ("MJ"), the couple's 18-month-old son, in Ms. Lemons' care. 26a. Ms. Lemons put Nakita to bed after Lori's departure, though she could hear Nakita fussing while trying to sleep around 4:00 p.m. 84a. At around 5:30 p.m., Ms. Lemons woke, fed, and burped Nakita, and then put her back down to sleep in her bedroom. *Id.*

MJ, who shared a room with Nakita, began banging on the wall shortly thereafter. *Id.* When Ms. Lemons reentered the bedroom, Nakita was struggling to breathe. *Id.* Frantic, Ms. Lemons rushed to the neighbor's home and pleaded for help. 52a. The neighbor, Renee Zdyb, saw Ms. Lemons cradling Nakita as formula poured out of her mouth. *Id.*

Ms. Lemons immediately called Lori and Lori's mother, Pamela Van Meter, to tell them that Nakita had stopped breathing again. 52a. Ms. Lemons had her neighbor Renee call 911, then placed Nakita on the couch and administered CPR. 53a. Nakita continued to spit up formula from her mouth and nose, but she was otherwise unresponsive. 55a.

Emergency responders soon arrived, moved Nakita to the floor, and continued to try and revive her through CPR. 46a-48a. By the time Lori arrived, Ms. Lemons was despondent, a "basket case," eventually leading to a full-blown emotional breakdown. 36a.

Nakita was placed on advanced life support and transported by ambulance to Annapolis Hospital. 28a. She was then "life-flighted" to the University of Michigan's C.S. Mott Children's Hospital, where Ms. Lemons again told medical personnel that such issues had occurred "twice before." 43a. Nakita passed away the following morning. 28a, 29a.

B. Death Investigation

Dr. Bader Cassin, a forensic pathologist, conducted Nakita's autopsy on October 11, 2005, the same morning she died. 59a. Based on Dr. Cassin's findings, Nakita appeared well fed and well cared for and did not exhibit any external signs of trauma or abuse. 61a, 62a. During his internal examination, Dr. Cassin noted bleeding on the surfaces of the brain, swelling in the brain itself, and bleeding behind the eyes. 62a, 63a. He concluded that these symptoms, standing alone, were consistent with Shaken Baby Syndrome. 62a.

Given Dr. Cassin's preliminary findings, the police investigation quickly focused on Ms. Lemons, the last adult with Nakita before her fatal episode. On the evening of October 11, the same day her daughter died, Ms. Lemons was arrested and transported to the local police precinct in Wayne. 79a. The next morning, Ms. Lemons was interviewed by Chief John Williams. 79a, 80a.

During the interview, Ms. Lemons explained that Nakita had been fussy leading up to the fatal episode, and that after feeding her, Ms. Lemons burped her, put her down for a nap, and later reentered the room to find her struggling to breathe. 84a. Ms. Lemons described administering CPR, and she wondered if she had shaken Nakita too hard while trying to revive her. 85a. Chief Williams stopped Ms. Lemons and informed her of Dr. Cassin's autopsy findings. *Id.* Confronted with an apparently certain medical diagnosis (which Dr. Cassin now agrees was incorrect), Ms. Lemons changed her account and stated that she shook Nakita three or four times because she could not get her to stop crying. 85a, 86a. Based on this statement and Dr. Cassin's diagnosis of Shaken Baby Syndrome, Ms. Lemons was charged with first-degree murder.

C. Trial and Conviction

Ms. Lemons' bench trial began on August 3, 2006. The prosecution called six witnesses (most of whom described the events leading up to Nakita's death), as well as Dr. Cassin and Chief Williams. Dr. Cassin testified about his autopsy findings and stated that only an external force

could have caused Nakita's injuries. 62a, 66a, 67a. Even without a subjacent skull fracture or any injuries to Nakita's neck or scalp, Dr. Cassin was firm in his SBS diagnosis. 73a.

Ms. Lemons' trial counsel did not call a medical expert to support any alternative theory or to refute Dr. Cassin's definitive SBS diagnosis. Instead, trial counsel relied solely on cross-examining Dr. Cassin and focused much of his cross-examination on whether SBS could occur unintentionally. 70a (questioning whether shaking can be done "naively"); 76a. The factfinder was thus left with only one mechanism of death: Shaken Baby Syndrome.

The prosecution's other main witness, Chief Williams, testified about what Ms. Lemons had told him during his interrogation. Specifically, he testified that Ms. Lemons first said she had found Nakita unable to breathe properly after she was fed and put down for a nap, but that she later admitted to shaking her "three or four times" after being "confronted" with Dr. Cassin's determination that Nakita had died as a result of shaking. 84a, 86a.

The trial court deliberated for two days before finding Ms. Lemons guilty of first-degree murder. 92a, 98a. The court emphasized Dr. Cassin's medical testimony in rejecting Ms. Lemons' primary defense of accident, finding instead that Nakita was shaken intentionally and repeatedly. *See* 95a ("according to Dr. Cassin's testimony, the brain damage that was caused, the subdural hematoma, shaking of the brain, the severing of the nerve sheaths in the brain, is reflective of both [sic] a repeated shaking multiple times."). Ms. Lemons was sentenced to life without parole. 100a.

D. Prior Appellate and Post-Conviction History

Ms. Lemons' appellate counsel raised two issues on direct appeal: (1) the trial court committed reversible error in denying a motion to quash the information because the prosecution failed to establish probable cause, and (2) the evidence at trial was insufficient to find Ms. Lemons guilty of felony murder. The Court of Appeals affirmed the conviction, *People v Lemons*, No. 273058 (Mich App Feb 26, 2008), and this Court denied leave to appeal. *People v Lemons*, 482

Mich 895, 895; 753 NW2d 169 (2008).

In 2010, Ms. Lemons filed a *pro se* motion for relief from judgment under MCR 6.500, which the trial court denied a few months later without a hearing. That motion did not raise the issues presented in the current motion.

E. The Current Motion and the Evidentiary Hearing

Ms. Lemons, represented by the Michigan Innocence Clinic, filed the instant motion for relief from judgment on March 18, 2016. The motion primarily argued, citing this Court's 2015 decision in *Ackley*, that the recognition that SBS diagnoses may be unreliable was new evidence that Ms. Lemons had not discovered at the time of her prior motion. The motion was supported by affidavits from several eminent physicians who concluded that Nakita likely died from non-traumatic causes. The motion argued, in the alternative, that if the challenges to the SBS diagnosis were available in 2006, then trial counsel was ineffective for failing to present an expert at trial.

The trial court granted an evidentiary hearing on the claim that the shift in scientific understanding of SBS diagnoses was new evidence, but it ruled erroneously that the ineffective assistance claim was procedurally barred under MCR 6.502(G) because the motion was a successive one. The evidentiary hearing was held on multiple dates in 2017.

1. Dr. Cassin Retracted His Prior SBS Diagnosis

At the evidentiary hearing in 2017, Dr. Cassin retracted his previous diagnosis of SBS. He testified that he had previously been taught that brain swelling, subdural bleeding, and retinal hemorrhages—which were called the "triad of findings at autopsy"—should, in the absence of another obvious cause of death, "evoke the diagnosis of shaken baby syndrome." 225a, 226a. Dr. Cassin was read a portion of a book chapter written by Dr. Jeffrey Jentzen, which stated that the triad "cannot be fully explained by any other medical entity." 247a. He testified that this passage fairly reflected the near-universal view of pathologists at the time of the trial in 2006. *Id*.

However, since the time of trial, Dr. Cassin and other forensic pathologists have changed their view on the validity of SBS: "My thinking has changed, I think consistent with the community of forensic scientists around the world. That, first of all, the triad of findings is not . . . exclusively diagnostic of . . . what was called at the time, the Shaken Baby Syndrome" and that "the findings of the triad are explainable by diseases and other abnormalities . . ." 231a. He testified that this change was based in part on challenges to the notion that the "forces necessary to produce the injuries that are described in this case . . . [can be] produced by shaking and only shaking . . ." *Id.* Dr. Cassin testified that the majority of forensic pathologists now agree that non-abusive events can cause subdural hemorrhages and retinal hemorrhages. 245a.

Dr. Cassin testified that he would now characterize Nakita Lemons' manner of death as "indeterminate, meaning it's unable to be determined." 232a. He agreed that choking on formula, or an "aspiration event," was a plausible explanation for Nakita's death. 233a

Consistent with his trial testimony, Dr. Cassin testified that CPR was a possible cause of the alleged acromion fracture in the shoulder. 235a. The fracture did not influence his conclusions at trial in 2006, nor did it affect his findings at the 2017 evidentiary hearing. 236a.

Dr. Cassin testified that he could not recall whether he knew about Ms. Lemons' police interrogation at the time of trial, but that, in any event, it "does not contribute to my investigation of the death . . . it does not indicate anything with regard to the cause of death." 236a. When asked why he agreed to testify in Ms. Lemons' favor at the evidentiary hearing, Dr. Cassin explained that he had made a mistake in his original diagnosis, and "I believe that I owe [the trial court] and you an explanation." 237a.

2. *New Defense Experts Challenged SBS And Testified To Other Causes of Death*

In addition to Dr. Cassin's retraction, Ms. Lemons presented testimony from five medical and biomechanical experts at the evidentiary hearing:

- Dr. John Galaznik (a board-certified pediatrician with extensive knowledge of the scientific literature on infant head injury);

- Dr. Patrick Barnes (a board-certified pediatric radiologist and pediatric neuroradiologist for over 40 years, professor of radiology at Stanford University, and co-founder of the Northern California Child Abuse Task Force);

- Dr. George Nichols (a board-certified pathologist who served for 20 years as the chief medical examiner for the State of Kentucky and has conducted over 5,000 autopsies in his career);

- Dr. Chris Van Ee (a Ph.D. biomechanical engineer with extensive experience researching head injuries and devising safety measures to prevent injury in collisions); and

- Dr. Roland Auer (a neuropathologist and brain researcher who has participated in thousands of autopsies and published over 100 peer-reviewed articles about brain neuropathology).

All five of these witnesses were qualified as experts in their fields without objection. All of them testified *pro bono*. The testimony of the defense experts fell generally into two categories: (1) explaining the problems with the SBS diagnosis in general; and (2) offering an alternative explanation for Nakita's death. As to the SBS diagnosis in general, the defense experts testified to the following:

- The SBS "triad" of symptoms was once thought by many, including some of the defense experts themselves, to be caused exclusively by shaking. 182a ("It was almost a religious canon"); 184a; 222a.

- More recently, significant controversy surrounding the SBS diagnosis has been fueled by a recognition that other diseases and processes can cause the triad of symptoms. 149a, 152a; 181a, 189a; 367a, 368a.

- No biomechanical study has been able to establish that shaking alone (without impact) is capable of generating the forces that would be required to cause the triad of symptoms. 143a, 145a, 152-153a, 157a, 178a; 336a, 344a-347a, 351a, 354a, 357a, 364a.

- However, shaking does generate forces sufficient to injure the highly vulnerable infant neck. 344a-347a, 351a, 354a (shaking generates "forces in the neck that are at about the level of injury, but they are way below the levels that are associated with bridging vein failures and getting subdural hematomas."). Thus, the absence of neck injuries is a challenge to the SBS hypothesis.

- The literature base allegedly supporting SBS is insufficient to establish that abusive

shaking alone can cause the triad or that shaking can be reliably distinguished from other causes. 154a, 156a, 159a; 184a; 371a.

As to an alternative theory of death in this case, the experts offered the following opinions:

- There is ample evidence in the medical records indicating that Nakita choked on formula prior to her collapse. 160a-161a, 164a; 193a-194a

- Hypoxia-ischemia (lack of oxygen to the brain), brought on by a choking event, can explain each of the neurological symptoms in this case, and this pathway is well supported by the literature. 165a-167a, 175a; 189a, 193a, 194a; 367a, 368a.

- Given that the acromion was never physically inspected at autopsy, it is impossible to know if the acromion defect is indeed a fracture, rather than an anatomical variant. Even if it is a fracture, it is not possible to say it was caused by abuse. 171a, 172a; 197a-199a; 211a-215a; 219a.

- There is no medical evidence from which to conclude that Nakita was shaken, and several findings contradict that diagnosis—including the lack of external injuries and the fact that there is no evidence of an injury to the neck or spinal cord. 160a, 161a, 172a; 4/19/17 at 185a, 195a, 196a, 202a.

3. *New Prosecution Experts*

The prosecution called four new experts at the evidentiary hearing to defend the theory of abuse that Dr. Cassin, the only prosecution expert to testify at trial, now repudiates. These experts, like Ms. Lemons' experts, addressed the SBS controversy in general and this case in particular. As to the SBS controversy in general, the prosecution's new experts testified that:

- The SBS diagnosis is well accepted in the medical community. 267a; 291a; 299a; 252a. The controversy about SBS is illegitimate and is limited to defense attorneys and "denialists." 266a; 374a-395a.

- The concept of a diagnostic "triad" is a "straw man" invented to manufacture controversy. 131a; 374a-395a. Neither the medical literature nor the pediatric and child abuse communities ever subscribed to a diagnostic triad. 374a-395a.

- Shaking alone can cause the injuries commonly described as the triad. 270a-276a; 315a, 316a. Biomechanical research to the contrary is not convincing because it cannot completely simulate infant anatomy. 249a; 282a-285a; 294a-296a.

As to the cause of death in this specific case, the new prosecution experts testified:

- Shaking alone was the cause of death in this case. 287a-291a; 310a.

- The acromion fracture is unequivocal and highly specific for abuse. 255a, 258a, 260a, 261a.

- Hypoxia-ischemia, brought on by choking, does not explain the injuries. 286a, 287a; 302a-307a.

The trial court denied relief from judgment in a written opinion dated October 5, 2018. 102a-127a. Ms. Lemons filed an application for leave to appeal in the Court of Appeals on April 1, 2019. After the Court of Appeals denied that application, this Court remanded the case to the Court of Appeals on leave granted on May 27, 2020. 128a.

A three-judge panel of the Court of Appeals heard oral arguments on March 2, 2021; one of those judges, Judge Tukel, passed away before a decision was released. The remaining two judges affirmed the denial of relief in an opinion on November 18, 2021. 129a-141a.

Ms. Lemons filed an application for leave to appeal to this Court on January 12, 2022. This Court granted leave on September 30, 2022 and asked the parties to address whether the Court of Appeals erred in holding that:

(1) the circuit court did not abuse its discretion by concluding that the biomechanical engineering evidence and testimony was inadmissible, or by excluding alternate causation theories that purportedly lacked scientific or factual support;

(2) the circuit court correctly denied the defendant relief despite its erroneous decision to exclude the defense experts' opinions regarding the validity of SBS diagnoses, reliance on the triad as a diagnostic tool, and the possibility of choking as an alternative cause of death; or

(3) the new evidence was insufficient to create a reasonable probability of a different outcome on retrial and warrant relief under *People v Cress*, 468 Mich 678, 692 (2003).

373a.

SUMMARY OF ARGUMENT

With the retraction of the sole expert to testify at trial, Ms. Lemons has clearly satisfied the standard for a new trial to be granted. However much the prosecution, the trial court, or the Court of Appeals may believe she would be re-convicted, the evidence against her has completely changed, and a new trial must be granted to the jury can adjudicate this case based on all of the evidence. The prosecution has argued that it could re-convict Mr. Lemons through the testimony of new experts, but that is no grounds to deny a new trial. As the Florida Supreme Court stated in a similar situation:

> The State cannot now distance itself from the evidence and theory it relied upon at trial by arguing that it could have still convicted [the defendant] without any of the now-discredited scientific evidence. While that might be possible, **we cannot turn a blind eye to the fact that a significant pillar of the State's case, as presented to the jury, has collapsed and that this same evidence actually supports the defense theory.**

Hildwin v State, 141 So 3d 1178, 1181 (Fla 2014) (emphasis added).

While the retraction of Dr. Cassin's original testimony is enough to require a new trial, But Ms. Lemons also presented the testimony of five new eminently qualified experts, all of whom attacked the SBS diagnosis and provided support for the alternative diagnosis that Nakita choked on formula. When that new evidence is factored in with Dr. Cassin's retraction, there can be no question that there would be a reasonable probability of a different outcome upon retrial.

The Court of Appeals agreed that the trial court abused its discretion in rejecting Dr. Cassin's retraction and in holding that SBS is so reliable that none of Ms. Lemons' new experts would be permitted to testify at a retrial. But the Court of Appeals committed a patent error requiring reversal in holding that the trial court was correct to exclude the testimony of biomechanics expert Dr. Chris Van Ee because biomechanics researchers use animals and dummies instead of real children to test the effects of shaking. Such a holding, if extended to other

cases, would call into question core research that is used in the automobile industry and consumer products testing. Specific applications of biomechanics research relying on biofidelic or animal models can, of course, be challenged at a new trial, but it is not the place of the Court of Appeals to declare a core scientific practice of the discipline to be so unreliable as to require exclusion.

Despite all of the new evidence that the Court of Appeals agreed was admissible, it still denied relief because Ms. Lemons made a police statement after being confronted by Dr. Cassin's supposedly infallible SBS diagnosis in which she admitted to shaking, and also because she ran to the neighbor and called her spouse when her daughter became unresponsive. Even the trial court did not rely significantly on those factors in denying relief, and the Court of Appeals erred in doing so. A confession extracted from a grieving parent confronted with a diagnosis that is supposedly incontrovertible and allegedly odd conduct while frantically seeking help certainly does not prove that Nakita was murdered. The fact that there is some evidence remaining that could cause a jury on retrial to convict does not justify refusing to allow that jury to hear all of the new evidence of innocence. The biomechanical evidence is particularly pertinent because, as Dr. Van Ee explained, that evidence casts grave doubt on whether the shaking mechanism Ms. Lemons was induced to admit can cause those symptoms at all. In other words, much of the new scientific evidence falsifies the very same evidence that the Court of Appeals found so persuasive.

This Court should do what is long overdue in this case: reverse the trial court and remand for a new trial.

ARGUMENT

Standard of Review

A trial court's decision denying a new trial is reviewed for abuse of discretion. *People v. Johnson*, 502 Mich 541, 564; 918 NW2d 676 (2018). Findings of fact supporting the ruling are reviewed for clear error. *Id.* Underlying questions of law are reviewed *de novo*. *People v Washington*, 468 Mich 667, 670-71; 664 NW2d 203 (2003).

A trial court abuses its discretion when it chooses an outcome that "falls outside the range of reasonable and principled outcomes." *Johnson*, 502 Mich at 564 (citation omitted). In reviewing a ruling on a motion for new trial, this Court "examine[s] the reasons given by the trial court. . . . Where the reasons given by the trial court are inadequate or not legally recognized, the trial court abused its discretion." *People v Leonard*, 224 Mich App 569, 580; 569 NW2d 663 (1997) (citation omitted). Where a trial court fails to apply the correct legal standard, it commits a per se abuse of discretion. *See People v Duncan*, 494 Mich 713, 723; 835 NW2d 399 (2013); *People v Grissom*, 492 Mich 296, 321; 821 NW2d 50 (2012).

"Decisions concerning the admission of evidence often involve preliminary questions of law that are reviewed de novo. These preliminary questions of law include questions involving the interpretation of rules of evidence." *Duncan*, 494 Mich at 723; 835 NW2d 399 (2013).

I. The Court of Appeals Erred In Holding That The Trial Court Did Not Abuse Its Discretion By Concluding That The Biomechanical Engineering Evidence And Testimony Were Inadmissible, And By Excluding Alternative Causation Theories Upon A Flawed And Improper Determination That They Lacked Scientific Or Factual Support.

Introduction

The Court of Appeals erred in upholding the trial court's decision to declare inadmissible Dr. Chris Van Ee's biomechanical expert testimony (which concluded that there is no scientific

evidence that shaking can cause the symptoms associated with SBS, much less that shaking could do so without causing neck and other injuries). The Court of Appeals concluded that the field of biomechanics is unreliable because biomechanical engineers use dummies and animals, instead of living human babies, to simulate the forces shaking would inflict upon an infant.

This reasoning is indefensible. So many things in our everyday lives that are created to protect us from impact injuries (helmets, child-safety seats, seat belts, etc.) are regularly tested in the field of biomechanics through the use of dummies and animals. The Court of Appeals' conclusion excluding the biomechanical testimony wrongfully barred Dr. Ee's conclusions and, if applied in other cases, would mean excluding relevant and routinely admitted biomechanics testimony in many kinds of cases, such as auto liability and consumer product tort litigation. Moreover, by excluding the biomechanical expert testimony in this case, the Court of Appeals would prevent Ms. Lemons from being able to fully explain why the SBS diagnosis is flawed—namely that it does not comport with the realities of physics—in contradiction with this Court's holding in *Ackley*.

A. Dr. Van Ee's Qualifications, Methods, And Conclusions Easily Satisfied MRE 702, And The Court Of Appeals' Decision Upholding The Exclusion Of His Testimony Is Misguided And Would Have Serious Consequences.

MRE 702 governs the admissibility of expert testimony:

> If the court determines that scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education may testify thereto in the form of an opinion or otherwise if (1) the testimony is based on sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

Further, "as long as the basic methodology and principles employed by an expert to reach a conclusion are sound and create a trustworthy foundation for the conclusion reached, the expert testimony is admissible no matter how novel." *Nelson v Am Sterilizer Co*, 223 Mich App 485, 492;

566 NW2d 671 (1997) (citing *Daubert v Merrell Dow Pharmaceutics*, 509 US 579, 596; 113 S Ct 2786; 125 L Ed 2d 469 (1993)).

At the evidentiary hearing, Dr. Van Ee, a biomechanical engineer, testified for Ms. Lemons that the forces produced by shaking alone are likely insufficient to produce brain swelling, subdural hematomas, and retinal hemorrhaging (the triad of SBS symptoms), without also causing a neck injury. 342a-345a, 354a. The Court of Appeals agreed with the trial court's decision to exclude Dr. Van Ee's testimony on the basis that the biomechanical evidence could not reliably be applied to SBS because biomechanical studies use inanimate or animal models that "would not necessarily translate to human infant anatomy," rendering its application "too tenuous." 135a. (citing *Gen Elec Co v Joiner*, 522 US 136, 145–46; 118 S Ct 512; 139 L Ed 2d 508 (1997)).

Under *Joiner*, evidence may be excluded if the trial court concludes that "there is simply too great an analytical gap between the data and the opinion proffered" because "nothing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert." *Joiner*, 522 US at 146. *See also Gilbert v Daimler Chrysler Corp*, 470 Mich 749, 760; 685 NW2d 391 (2004) (excluding expert's testimony under *Joiner* because of a "yawning 'analytical gap' between the data and the opinion expressed by the expert." *Id.* at 782–83).

However, Dr. Van Ee's testimony is not based on his "*ipse dixit*," nor is there a "yawning analytic gap" between the data and his conclusions. His testimony was based on a long history of scientific discovery in the field of biomechanics, backed up by multiple studies at major research institutions and studies about traffic and product safety conducted by the US government and major companies like General Motors. 322-324a, 331a, 332a, 344a, 345a, 361a.

Indeed, **the Court of Appeals decision to exclude biomechanical testimony that relies on scientific modeling is antithetical to the very idea of what science is**: using representative

models in controlled experiments to provide useful data about the real world is pretty much the entirety of science. For example, physicists have created theories and mathematical models based on the behavior of atoms and electrons that govern everyday realities like the structure of bridges and the design of airplanes. But no physicist has ever seen an electron; its behavior is inferred through scientific modeling. Such is the work of science, and the Court of Appeals was wrong to see basic scientific modeling, inference, and application as a bridge to far.

The trial court abused its discretion when it concluded that Dr. Van Ee's testimony (along with the testimony from all of the other new defense experts who challenged the SBS diagnosis) would be inadmissible at a retrial. In fact, biomechanical studies can be reliably applied to SBS, so excluding the evidence falls "outside the range of principled outcomes." *People v Kowalski*, 492 Mich 109, 119; 821 NW2d 14 (2012).

The Court of Appeals erroneously upheld the exclusion of Dr. Van Ee's expert testimony on the ground that, as a biomechanics expert, he models the impact of forces on humans by relying on crash-test dummies and animals instead of human subjects. 136a. **Such reasoning would lead to the exclusion of a great deal of biomechanics testimony in all kinds of litigation**.

Dr. Van Ee's conclusion that shaking alone is not sufficient to produce the triad of symptoms of SBS without a neck injury is based on decades of scientific studies about how the infant body responds to shaking. 332a, 343a, 344a, 354a. Biomechanical research into SBS grew out of research into transportation safety regulations in the late 1980s, using the same methods that are employed to study helmets and airbags. 344a. Some of the first experiments in the field were performed on monkeys when scientists tested the effects of angular acceleration on the brain by mimicking severe rear-end collisions on monkeys. Ommaya, Goldsmith, Thibault, "Biomechanics and Neuropathology of Adult and Paediatric Head Injury," *British Journal of Neurosurgery*, 2002 Jun; 16(3) 220-42 (2002). Ommaya and his co-authors found that higher accelerations were needed

to cause injuries in smaller brains, and it was unlikely the speed and severity produced in the animal models could be produced by human shaking. *Id.*

The Ommaya study produced results similar to those found by Duhaime et al. in 1987. Duhaime used models of 1-month-old infants with various neck and skull parameters, and they measured the accelerations caused by shaking and impacts. Duhaime, Gennarelli, Thibault, et al., "The Shaken Baby Syndrome: A Clinical, Pathological and Biomechanical Study," *Journal of Neurosurgery* (1987) pp. 411–13. None of the accelerations produced by shaking exceeded the range required for injury. *Id.* at 413–14.

Dr. Van Ee himself conducted a study where he recreated a known, videotaped fatality of an infant with a crash-test dummy to study the accelerations caused in short falls, and he found that the data from the dummy was consistent with the injury criteria from the video. Van Ee, Raymond, Thibault, et al., "Child ATD Reconstruction of a Fatal Pediatric Fall," *Proceedings of the ASME 2009 International Mechanical Engineering Congress & Exposition* (2009), p. 5.

Many of the studies Dr. Van Ee cited were specifically concerned with the question that the Court of Appeals raised as to whether the studies reliably model the human infant, so they use a variety of methods to cross-check for accuracy. 332a; *see, e.g.*, Prange, Luck, Dibb, Van Ee, et al., "Mechanical Properties and Anthropometry of the Human Infant Head," *Stapp Car Crash Journal* (2004), pp. 12–14 (comparing infant crash-test dummies with infant cadavers to confirm reliability of data from dummies). Clinical findings are used to verify the types of injuries that are predicted by the studies in animal and inanimate models. Computer models have been used to simulate the neck stiffness during simulated shakes in order to improve biofidelity in models. *See e.g.*, Jones, "Development of Computational Biomechanical Infant Model," *Medicine Science and the Law* (2015), at pp. 293–95.

Dr. Van Ee's conclusions rely on the above experiments that demonstrate that shaking can

be reliably modeled in infants. These studies show an appropriate nexus between the data and Dr. Van Ee's conclusions, because the models reproduce consistent results that shaking alone does not produce sufficient force to cause the injuries associated with SBS, using different methodologies, and therefore, his conclusions clearly are admissible. *Joiner*, 522 US at 518.

The trial court abused its discretion, and the Court of Appeals erred by excluding Dr. Van Ee's testimony because his credentials and methodologies easily satisfy MRE 702. Dr. Van Ee earned his Ph.D. in Mechanical Engineering from Duke University in 2000, where he studied the effects of impacts and accelerations in orthopedic biomechanics. 320a. While working on his Ph.D., he worked with the National Highway Traffic Safety Administration and General Motors, studying neck strength in airbag impacts, especially in relation to injuries in children and infants. 322a, 323a. After graduating, Dr. Van Ee researched impact biomechanics for automotive safety, specifically injuries to pregnant women and their fetuses, at the University of Michigan Transportation Research Institute. 324a. Currently, Dr. Van Ee is a consultant at Design Research Engineering, where he consults on questions of impact biomechanics and mechanical engineering. 325a. The prosecution and the trial court did not object to Dr. Van Ee's credentials at the evidentiary hearing. 334a

Dr. Van Ee has published extensively on pediatric head injuries, including studies comparing impacts and shaking in multiple papers and contributions to Jan Leestma's neuropathology textbook. 327a-329a; He has used infant crash-test dummies to test infant car seats for Graco, Even-flo, and Costco, and in his own research to simulate short falls in infants. 326a, 327a, *See e.g.*, Van Ee, "Child ATD Reconstruction," *supra.*

The methods that Dr. Van Ee based his conclusions on, such as using crash-test dummies and animal models to model injuries, have been applied for at least four decades to produce "testable results consistent with an objective, scientific process." *Kowalski*, 492 Mich at 133–34.

As in *People v Unger*, Dr. Van Ee "'didn't use bizarre methods, he didn't use strange methods…he used standard methods…in coming to a conclusion," and so his credibility is "for the jury to decide." *People v Unger*, 278 Mich App 210, 220; 749 NW2d 272, 284 (2008).

In *Unger*, repeated admission of an expert witness weighed in favor of his admission. 278 Mich App at 219. As Dr. Van Ee explained during the evidentiary hearing, he has testified in court over 70 times, and his testimony had never been excluded. 332a, 333a. Dr. Van Ee has testified in over 40 cases where shaking was mentioned in an infant's medical records and in 15-25 cases where shaking an infant was mentioned in court. 332a, 333a; *see, e.g.*, *People v Campbell*, unpublished opinion of the Court of Appeals, issued January 27, 2005 (Docket No. 245263). *See also Tate v State*, 136 So3d 624, 626–27 (Fla App 2013); *People v Sanchez*, 49 Cal App 5th 961, 973; 263 Cal Rptr 3d 510 (2020); Havard v State, 312 So3d 326, 330–35 (Miss 2020).

Because Dr. Van Ee's testimony was based on standard and reliable methods and his knowledge as a qualified expert in his field, his testimony should be heard at a retrial. The weight given to his testimony should be for a jury on retrial to decide. *Unger*, 278 Mich App at 220.

B. The Court Of Appeals' Reasoning Would Exclude Biomechanics Testimony From All Kinds Of Cases, Including Automotive Litigation.

As the Court of Appeals correctly stated, there is no ethical way to test SBS theories on a living infant. 135a. But this problem is hardly unique to SBS. Ford, Chrysler, and GM cannot test the safety of their vehicles by loading them with human subjects and driving them into walls at 70 miles per hour. Biofidelic dummies (i.e., those that are designed by experts to closely match human biology) are used in both instances.

This Court would not exclude as unscientific crash tests conducted by the National Highway Traffic Safety Administration or the Insurance Institute for Highway Safety (IIHS)

simply because crash-test dummies were used instead of real humans. The result that the courts below reached here is no less absurd.

Biomechanical evidence has been admissible in a range of other cases from products liability to automobile cases. Biomechanics is used by the federal government, particularly by the Department of Transportation and the Consumer Product Safety Commission, to develop safety standards for many consumer products, including children's car seats and playground equipment. 339a. Additionally, biomechanics is used by private industry to test the safety of its products. 327a. Although biomechanical modeling using crash-test dummies does not provide an exact replica of human injuries, it would be truly startling for a judge in, for example, an automobile liability case to exclude all such studies under *Daubert*. Suffice it to say that there is absolutely no precedent for doing so, but that is exactly what the Court of Appeals did here.

In Michigan, the Court of Appeals admitted expert biomechanics testimony in *Lopez v GMC*, a product liability action alleging that the plaintiff sustained injuries in a car crash because her seat belt failed on impact. 224 Mich App 618, 621; 569 NW2d 861 (1997). In *Lopez*, the defense's biomechanics expert was admitted to testify that the seat belt functioned properly based on the results of tests with crash-test dummies. *Id.* at 623.

Biomechanics expert testimony has also been admitted in other types of cases. In *Kelham v CSX Transportation Inc*, a personal injury case, a biomechanical engineer testified about how a train conductor would have fallen during a collision, contradicting the conductor's testimony. 840 F3d 469, 471 (CA 7 2016). In *Berner v Carnival Corp*, biomechanics testimony was admitted to show that the force of the plaintiff's contact with the floor after being assaulted was sufficient to cause a brain injury. 632 F Supp 2d 1208, 1210 (SD Fla 2009). In *Ensley v Costco Wholesale Corporation*, a biomechanical expert was admitted in a products liability case to testify that the only plausible scenario was that the ladder broke and then the plaintiff fell, causing her injuries. 1

Wash App 2d 852, 854–55; 407 P3d 373, 374 (2017).

Clearly then, biomechanical testimony that provides relevant answers through testing on biofidelic dummies is admissible. The opposing party is welcome to challenge any specific shortcomings of the testing on cross-examination, but to exclude biomechanical studies entirely, as the courts below did here, is a clear abuse of discretion.

C. Exclusion Of Biomechanical Evidence Under *Daubert* Is Also Contrary To *Ackley*, Which Discussed The Need For Both Sides In An SBS Case To Be Able To Present Scientific Evidence.

In *Ackley*, this Court stressed the importance of defense counsel consulting experts in order to present the "prominent controversy within the medical community regarding the reliability of SBS/AHT diagnoses." 491 Mich at 391-92. This Court explained that defense counsel's duty to make reasonable investigations is heightened in SBS cases, which involve "such substantial contradiction in a given area of expertise[.]" *Id.* at 392. In cases involving SBS diagnoses, this Court also called upon attorneys to "assess the reliability of the diagnoses under the standards of evidence-based medicine." *Id.* (citing Findley et al., *Shaken Baby Syndrome, Abusive Head Trauma, and Actual Innocence: Getting It Right*, 12 Hous J. Health L. & Policy 209, 212 (2012)).

Dr. Van Ee's testimony is essential to examining the prosecution's diagnosis of SBS through the lens of evidence-based medicine. As Dr. Van Ee testified, without the biomechanical evidence, there is no way for doctors to determine if shaking actually caused an infant's injuries because doctors do not have the ability to go back and reconstruct the accident and understand the forces at work. 339a, 340a.

While *Ackley* does not hold that every defense expert must be admitted in an SBS case, biomechanical testimony of the sort Dr. Van Ee gave here is sufficiently reliable to be admitted under MRE 702. Biomechanics testimony based on crash-test dummies and animal testing is routinely admitted in civil and criminal cases, and that testimony is backed up by more than 40

years of scientific knowledge and discovery. The unreasonable exclusion of such testimony by the courts below undermines *Ackley* because it excludes reliable evidence that is critical to explaining the scientific controversy surrounding SBS to a jury.

II. The Court Of Appeals Erred in Upholding The Trial Court's Denial Of Relief From Judgment, Where The Trial Court Erroneously Excluded Defense Experts' Opinions Regarding The Validity of SBS Diagnoses, Reliance On The Triad As A Diagnostic Tool, And The Possibility Of Choking As An Alternative Cause Of Death.

A. The Court of Appeals Correctly Found That The Trial Court Abused Its Discretion In Holding Inadmissible The Opinions Of Ms. Lemons' New Medical Experts And In Rejecting The New Opinion Of Dr. Cassin.

The Court of Appeals correctly found that the trial court abused its discretion in its "decision to exclude the defense [medical] experts' opinions regarding the validity of SBS diagnoses, reliance on the triad as a diagnostic tool, and the possibility of choking as an alternative cause of death." 138a.

The reliability of proposed expert testimony turns on several factors, including "whether the theory has been or can be tested, whether it has been published, and peer-reviewed, its level of general acceptance, and its rate of error if known." *Kowalski*, 492 Mich at 131 (citing *Daubert*, 509 US at 593-594). As the Court of Appeals explained, "the proper role of the trial court is to filter out expert evidence that is unreliable, not to admit only evidence that is unassailable. The inquiry is not whether an expert's opinion is necessarily correct or universally accepted. The inquiry is into whether the opinion is rationally derived from a sound foundation." 135a, (quoting *Chapin v A & L Parts, Inc*, 274 Mich App 122, 139; 732 NW2d 578 (2007) (opinion by Davis, J)). "An expert's opinion is admissible if it is based on the 'methods and procedures of science' rather than 'subjective belief or unsupported speculation.'" *Id.* (citing *Daubert*, 509 US at 590).

Based on these standards, the Court of Appeals correctly found that the trial court abused its discretion by concluding that the testimony of Ms. Lemons' medical expert witnesses would

not be admissible at a retrial. The Court of Appeals explained that the trial court's reasoning for exclusion was troubling and that "**the [trial] court was attempting to assess which of the competing views regarding HIE (hypoxic-ischemic encephalopathy) was correct**." 137a (emphasis added). The Court of Appeals went on to state that "the defense theory is…apparently disputed within the medical community, and the court should have focused on the reliability of the underlying scientific methods, rather than attempting to resolve the dispute." *Id.* (citing *Unger*, 278 Mich App at 217).

The trial court, in excluding the testimony, emphasized a study that "revealed that less than 5% of the members of the medical community surveyed believed choking or hypoxic-ischemic encephalopathy caused subdural hemorrhages." 123a. The trial court stated that this survey result led to the conclusion that the defense's choking theory was not supported by "the vast majority of medical experts and represents an opinion not generally accepted in the medical community." *Id.* As the Court of Appeals correctly explained, however, "general acceptance of an opinion is but one factor in assessing reliability." 137a.

The Court of Appeals correctly explained, "the mere fact that many or even most practitioners do not agree with these opinions does not make them automatically unreliable." *Id.* The other factors to be considered, as per *Daubert*, lead to the conclusion that the defense experts were reliable and that the trial court erred in excluding their testimony. *Daubert*, 509 US at 593-594. "The defense experts cited published articles, reports, and studies that supported their opinions." 135a. They relied on "medical literature, general understanding of anatomical and physical processes, personal clinical experience, etc." to support their opinions on HIE. 136a. Importantly, the Court of Appeals pointed out, the reliability of the defense's HIE theory is supported by factual evidence, "including Nakita's earlier history of apparent life-threatening events and witness statements about the formula in her mouth during resuscitative efforts." *Id.*

These considerations point towards the reliability of the defense expert testimony. The Court of Appeals stated that "there is a genuine dispute regarding SBS and the diagnostic significance of the triad, and it was not for the trial court to decide which view ought to be credited." 135a. Thus, the trial court's "decision to exclude the defense experts' opinions regarding the validity of SBS diagnoses, reliance on the triad as a diagnostic tool, and the possibility of choking as an alternative cause of death" was an abuse of its discretion, as it was outside the range of reasonable outcomes. 137a.

The trial court also abused its discretion in rejecting the new testimony of forensic pathologist and medical examiner Dr. Bader Cassin, the only medical expert to testify for either side at the original trial. In analyzing Dr. Cassin's retraction of his trial testimony and his original diagnosis of SBS, the trial court determined that Dr. Cassin's "change in opinion does not cause this court to believe that a different result would be probable at a retrial." 115a. In coming to this conclusion, the trial court reasoned that "courts have viewed recanted testimony with skepticism... Although the present case does not involve the recantation of a civilian witness, the principle of skepticism toward recanted testimony still applies." 113a. The trial court further asserted that the basis for Dr. Cassin's change in opinion was "vague" and claimed that he "could not cite any specific authority, scientific studies or scientific journals or developments that have caused him to change his opinion." 114a. The trial court then declared that Dr. Cassin's change in diagnosis was "merely a speculative opinion." 114a.

The trial court was way off the mark here, as the Court of Appeals rightly held. The Court of Appeals correctly held that the trial court's assertion that recantations are generally viewed with skepticism has "little application in this context." 138a. Dr. Cassin's "new testimony centers on his change of professional opinion… Dr. Cassin's change of opinion came about because of developments in scientific research." *Id.* The Court of Appeals also correctly held that Dr. Cassin's

testimony was not "rendered unreasonably vague merely because he was unable to cite specific authority for his change of opinion." *Id*. Thus, the Court of Appeals correctly held that the trial court incorrectly viewed Dr. Cassin's testimony with the skepticism usually accorded to lay witness recantations and that the trial court erred in asserting Dr. Cassin's testimony was unreasonably vague.

B. The Court Of Appeals Usurped The Role Of The Jury At Retrial By Holding That Ms. Lemons' Statement And Her Panicked Behavior Would Outweigh New Expert Testimony On Retrial.

Even after the Court of Appeals acknowledged that the recantation of the only medical expert to testify for either side at trial was "obviously favorable to [Ms. Lemons]" 138a, and held that the testimony of the defense's new medical experts would be admissible at a retrial, it committed clear error in concluding that the trial court did not err in denying relief. The Court of Appeals concluded that the statement and behavior of a distraught and grieving Ms. Lemons negated the weight of all of this new evidence. 139a.

But even if Ms. Lemons' statement and behavior *might* lead a jury to convict upon retrial, there is nevertheless a reasonable probability, in light of all of the highly favorable new evidence, that the jury would acquit. Thus, the standard for a new trial is met. Again, the Florida Supreme Court's words in *Hildwin* are highly persuasive here:

> The State cannot now distance itself from the evidence and theory it relied upon at trial by arguing that it could have still convicted [the defendant] without any of the now-discredited scientific evidence. While that might be possible, **we cannot turn a blind eye to the fact that a significant pillar of the State's case, as presented to the jury, has collapsed and that this same evidence actually supports the defense theory.**

Hildwin v State, 141 So 3d 1178, 1181 (Fla 2014) (emphasis added).

And it is important also to consider this Court's statements in *People v Johnson*, noting that whether or not a new trial is warranted is dependent on what a "reasonable juror" might do

upon retrial, and not what the post-conviction court "itself might decide, were it the ultimate fact-finder." 502 Mich at 568. Here, there can be no question that a reasonable juror could decline to convict Mr. Lemons given Dr. Cassin's retraction and all of the other new evidence supporting the defense, even if there is some other evidence that the prosecution may point to upon retrial.

Speaking of that other evidence: Ms. Lemons' statement does not warrant denying Ms. Lemons relief for two reasons: (1) the statement was not the primary evidence against Ms. Lemons at trial; it was secondary to Dr. Cassin's now-retracted homicide diagnosis—**indeed, the trial court mentioned the statement only once, on the last page of its 25-page opinion denying relief**, 126a; and (2) the new medical and biomechanical evidence supports the defense theory that the statement was a false confession.

As to the first of these two reasons, Dr. Cassin's trial testimony was the main incriminating evidence against Ms. Lemons. In *Ackley*, this Court stated that "[i]n a SBS/AHT case such as this, where there is no victim who can provide an account, no eyewitness, no corroborative physical evidence, and no apparent motive to kill, the expert *is* the case." *Ackley*, 497 Mich. at 397 (internal citation omitted; emphasis in original). **That prosecution expert from trial has now retracted his diagnosis of SBS and agrees that Nikita's death could have resulted from an accidental cause (i.e., choking).** With this vital change in the expert testimony of the pathologist who examined Nakita, the prosecution's case from trial is so substantially undermined as to require a new trial, even if the confession is viewed as independent of the medical evidence.

But **the confession is *not* independent of the medical evidence**. Rather, Ms. Lemons, who was distraught because her infant daughter had died a day earlier, confessed *only after* being confronted with the supposedly conclusive medical evidence of shaking. 85a (Chief Williams testifying that, in response to Ms. Lemons' denials, he "confronted [Ms. Lemons] with the fact that . . . the autopsy showed that Nakita had died as a result of being shaken"). That tried-and-true

interrogation technique—confronting a suspect with supposedly indisputable scientific evidence—has been recognized as a leading factor contributing to false confessions, especially in the SBS context. *See e.g. People v Thomas*, 22 NY3d 629, 643; 8 NE3d 308 (2014) (vacating conviction upon concluding that parent's admissions in child death case were involuntary where they were induced by being confronted with supposedly conclusive SBS diagnosis).

As the Seventh Circuit put it, using a supposedly incontrovertible medical diagnosis of SBS during interrogation "destroy[ed] the information required for a rational choice" and "forced on [the suspect] a premise that led inexorably to the conclusion that he must have been responsible for [the child]'s death." *Aleman v Village of Hanover Park*, 662 F3d 897, 906 (CA 7 2011). The Seventh Circuit explained, "[i]f a question has only two answers—*A* and *B*—and you tell respondent that the answer is not *A*, and he has no basis for doubting you, then he is compelled by logic to 'confess' that the answer is *B*." *Aleman*, 662 F3d at 907. Here, in response to her denials, the police told Ms. Lemons that the medical evidence proved she was lying. Ms. Lemons was "compelled by logic to 'confess'" that she must have shaken her daughter. *Aleman*, 662 F3d at 906-907. Since the evidence now shows that the interrogation was tainted by a highly questionable (and since retracted) medical diagnosis, the reliability of the resulting confession is tainted as well, just as it was in *Aleman*.

The Court of Appeals attempted to distinguish the facts in *Aleman* from the present case, stating that "by defendant's account, Nakita's health declined *after* the defendant shook her, whereas the baby in *Aleman* collapsed before the plaintiff shook him to elicit a response." 139a. In fact, Nakita's health had long been an issue, and she had episodes of difficulty breathing beginning when she was just one week old. 23a. Indeed, Nakita had been unusually fussy in the days leading up to her death, a sign that she was feeling unwell. *Id*.

The Court of Appeals also stated that, contrary to the facts in *Aleman*, Ms. Lemons "was

the first to question whether she shook Nakita too hard." 138a. It is unclear why this distinction would matter: in either case, such a statement is not a confession, but rather just a reflection of the frantic self-inquiry that goes through the panicked mind of a parent whose child has just died.

Moreover, it is unclear from the existing evidence whether Ms. Lemons was actually first to bring up the issue of shaking, and no recording of Ms. Lemons' police interview exists. Finally, the Court of Appeals seemed to conclude that Ms. Lemons accepted the version of events in her confession too easily, whereas the defendant in *Aleman* "repeatedly expressed disbelief that he could have caused the baby's injuries." 139a. Again, with no recording of the original interrogation to turn to, we have only Ms. Lemons' short written statement and Chief Williams' testimony about the interview, neither of which cover this issue. The Court of Appeals was largely guessing, and it was improper for that court to draw conclusions about Ms. Lemons' demeanor or alleged lack of protest during the interrogation without record support.

Further, the new evidence from the 2017 evidentiary hearing demonstrates that the confession is unreliable because, as multiple expert witnesses testified at the hearing, there is (at the very least) substantial doubt that shaking can generate the forces necessary to cause the triad of symptoms. Ms. Lemons' experts all testified that new science and data show that shaking alone *cannot* produce the triad of symptoms once used to diagnose SBS without, at minimum, causing serious injury to the infant's neck. 342a-358a. On retrial, a jury would hear this new testimony and could, quite logically, conclude that Ms. Lemons' confession was a false one because it describes a mechanism of injury that has been disproven by science.

Finally, confessions extracted during police interrogations are not unassailable evidence. As the U.S. Supreme Court has noted, a "frighteningly high percentage of people [can be induced to] confess to crimes they never committed." *JDB v North Carolina*, 564 US 261, 269; 131 S Ct 2394; 180 L Ed 2d 310 (2011) (emphasis added; quotation marks and citation omitted).

Once again, the trial court paid appropriately little attention to the confession, mentioning it only once in its 25-page opinion. 126a. The Court of Appeals erred by acting as if it were a jury and declaring that it viewed the statement as more persuasive than the retracted diagnosis and all of the new medical evidence. That decision must be made by a new jury, not the Court of Appeals.

III. The New Evidence Presented By Ms. Lemons Was Sufficient To Create A Reasonable Probability Of A Different Outcome On Retrial And Warrant Relief Under *People v Cress*, 468 Mich 678, 692 (2003).

A defendant is entitled to relief from judgment on the basis of newly discovered evidence where: (1) the evidence itself, not merely its materiality, is newly discovered; (2) the newly discovered evidence is not cumulative; (3) the party could not, using reasonable diligence, have discovered and produced the evidence at trial; and (4) including the new evidence creates a reasonable probability of a different outcome upon retrial. *People v Cress*, 468 Mich 678, 692; 664 NW2d 174 (2003); *see also People v Tyner*, 497 Mich 1001; 861 NW2d 622 (2015).

A. Even The New Evidence That The Court Of Appeals Agreed Would Be Admissible Upon Retrial Clearly Satisfies The *Cress* Materiality Standard.

Counsel for Ms. Lemons at a new trial, armed with the new medical evidence, including Dr. Cassin's retraction of his original diagnosis and several new grounds to challenge the reliability of Ms. Lemons' police statement, would be in a vastly different position than in the first trial. As this Court recognized in *Ackley*, a new ability to challenge the prosecution's medical evidence and present both sides of a medical controversy like SBS would also create new and much more powerful ways to challenge a purported confession. *See Ackley*, 497 Mich at 395 n.8. The factfinder would learn that the only pathologist who conducted the autopsy on Nakita Lemons now believes that an SBS diagnosis cannot be supported by the medical evidence and that a conclusion of death by accidental cause—such as choking—is entirely plausible. The retrial in this case would thus be fundamentally different—one where "a significant pillar" of the State's case against Ms.

Lemons (the account of Dr. Cassin), has not just been negated, but actually serves now to affirmatively support the defense. The standard to grant a new trial is thus clearly met. *See Hildwin*, 141 So 3d at 1181.

A jury should be given the opportunity to weigh all of the evidence here and reach its own conclusions about the weight of the police statement in this new light. *See Matthews v Abramajtys*, 319 F3d 780, 790 (CA 6 2003) ("The actual resolution of the conflicting evidence, the credibility of witnesses, and the plausibility of competing explanations is exactly the task to be performed by a rational jury."); *Barker v Yukins*, 199 F3d 867, 874–75 (CA 6 1999) (post-conviction court should not "stand in the place of the jury, weighing competing evidence and deciding that some evidence is more believable than others. Rather, it is for the jury . . . to decide. . . .")

In addition to the conclusive weight it mistakenly placed on Ms. Lemons' police statement, the Court of Appeals also erred in relying heavily on other supposedly inculpatory evidence about Ms. Lemons' behavior as she frantically sought help for Nakita. 140a. Specifically, the Court of Appeals inferred from the original trial testimony a reluctance on Ms. Lemons' part to call 911, which it believed suggested a "consciousness of guilt." *Id*. Again, **this is an issue that the trial court assigned no weight or significance to in its opinion**, and rightfully so, because observations of a person's behavior during a traumatic event are not reliable indicators of guilt.

There are many ways in which a jury might interpret Ms. Lemons' behavior after Nakita lost consciousness. Ms. Lemons desperately sought help immediately upon realizing her daughter was unwell. She called her spouse, as she had done before when Nakita had difficulty breathing, and she also called her mother-in-law. 24a, 39a. Rather than inferring guilt from Ms. Lemons' actions, a jury could find that Ms. Lemons frantically tried to help Nakita. Moreover, Ms. Lemons' wife testified that when she arrived home, Ms. Lemons broke into "full-blown tears" and "turned into a basket case," which is the reaction one would expect from a terrified parent watching her

infant receive CPR from paramedics. 36a.

Much like the present case, in *Ackley*, "[t]he Court of Appeals cited the 'peculiar' nature of defendant's actions on the day of the incident as an indication of his guilt," including the defendant's "failure to seek help from his neighbors . . . and his decision to first go to his mother's house rather than the hospital." *Ackley*, 497 Mich at 395 n.8. The fact that in *Ackley* the Court of Appeals faulted the defendant for *not* having gone to his neighbors for help, but here the Court of Appeals faulted Ms. Lemons for having done exactly that, shows precisely how easily these behavioral cues can be interpreted in either direction. Ultimately, a jury at retrial should decide whether Ms. Lemons' behavior indicates anything more than a frantic parent's attempt to get help; it is improper for post-conviction courts to step in and usurp the jury's role. *Ackley*, 497 Mich at 395 n.8; *Abramajtys*, 319 F3d at 790; *Barker*, 199 F3d at 874–75. And once again, Ms. Lemons' counsel on retrial will have the evolved science and new experts to provide the factfinder with "a different lens through which to view his client's behavior," and it is reasonably likely that with that new evidence, "those same 'peculiar' actions by the defendant might [] instead be[] perceived as the missteps of a panicked, but nonetheless innocent, caretaker." *Ackley*, 497 Mich at 395 n.8.

The Court of Appeals abused its discretion when it usurped the role of factfinder, weighing new evidence that a new jury should hear. *See Johnson*, 502 Mich at 568. Taken together, the new evidence of a retracted diagnosis from the only expert to testify at trial combined with new experts undermining the prosecution's trial theory and supporting a non-abusive diagnosis creates a reasonable probability of a different result upon retrial. The Court of Appeals clearly erred in affirming the trial court's denial of relief.

B. The New Evidence The Court Of Appeals Would Exclude—Dr. Van Ee's Testimony—Also Would Create A Reasonable Probability Of A Different Outcome Because It Shows That Shaking Cannot Generate Enough Force To Cause The Injuries Diagnostic Of SBS Without Injuring The Neck, And Nakita Did Not Have A Neck Injury.

At the 2017 evidentiary hearing, Dr. Van Ee—the only biomechanical engineer who testified for either side—testified that the existing scientific evidence does not support the claim that shaking can produce the triad of symptoms, at least not without causing serious injury to the neck. 343a-358a. In his 2017 testimony, Dr. Cassin also cited biomechanical evidence as particularly important to the change in his opinion he reached in this case. 231a. Even Dr. Christian, one of the prosecution's new witnesses at the evidentiary hearing, acknowledged that she had admitted in multiple publications that there is substantial controversy about whether shaking alone can cause the triad of symptoms. 313a, 318a.

Because there is doubt in the biomechanical community as to whether shaking can cause the triad of symptoms that Dr. Cassin observed in Nakita, there must be grave doubt as to whether Ms. Lemons' police statement is true. Just as the Court would question the validity of a confession to a stabbing when there are no stab wounds, the confession here describes a mechanism—shaking—that many experts, including the pathologist who performed the autopsy in this case, now believe is medically insupportable as a cause for the particular symptoms Nakita had.

In sum, although the Court of Appeals correctly held that the trial court abused its discretion in discounting Dr. Cassin's retraction and in excluding on *Daubert* grounds the testimony of all of Ms. Lemon's medical experts, the Court of Appeals still erred in excluding expert biomechanics testimony that showed that shaking could not have caused Nakita's symptoms. That biomechanics testimony, standing alone, would create a reasonable probability of a different outcome.

Given Dr. Cassin's retraction and all of the other new evidence described above, the new evidence easily creates a reasonable probability of a different outcome. The Court of Appeals erred

in giving preclusive weight to Ms. Lemons' statement to deny a new trial because it is for a new jury, not a post-conviction court, to weigh credible new evidence and decide whether the prosecution can still meet its burden to convict the defendant.

CONCLUSION AND RELIEF REQUESTED

For the reasons stated above, Ms. Lemons respectfully requests that this Court summarily reverse and remand for a new trial or, in the alternative, grant leave to appeal.

Respectfully Submitted,

s/ David A. Moran (P45353)
Attorney for Defendant-Appellant

s/ Elizabeth J. Cole (PA Bar No. 327703)
Attorney for Defendant-Appellant

s/ Samuel Clougher
Student Attorney for Defendant-Appellant

MICHIGAN INNOCENCE CLINIC

s/ Imran J. Syed (P75415)
Attorney for Defendant-Appellant

s/ Breezy Adams
Student Attorney for Defendant-Appellant

Dated: November 14, 2022

STATEMENT REGARDING WORD COUNT

This brief contains **11,115** countable words, which is within the 16,000-word limit set by MCR. 7.212(B).