Stewart Levitas v. Michael Davon Christian, No. 58, September Term, 2016, Opinion by Adkins, J.

MARYLAND RULE 5-702 — EXPERT WITNESS TESTIMONY — SOURCE OF LEAD EXPOSURE: In a lead paint case, a pediatrician who was designated as an expert witness had a sufficient factual basis under Maryland Rule 5-702 to testify about the source of the plaintiff's lead exposure. The expert considered information given to him by the plaintiff's attorney, which included positive lead testing on the subject property, the age of the property, Maryland Department of the Environment and Department of Housing and Community Development records, the plaintiff's Department of Health and Mental Hygiene testing records, and family members' deposition testimony, and explained how he assessed this information. Additionally, the expert took into account the other possible source of the plaintiff's lead exposure when developing his opinion. Thus, the trial court abused its discretion in precluding him from testifying about source causation on the ground that his opinion lacked an adequate factual basis.

MARYLAND RULE 5-702 — EXPERT WITNESS TESTIMONY — MEDICAL CAUSATION: In a lead paint case, a pediatrician who was designated as an expert witness had the requisite qualifications and factual basis under Maryland Rule 5-702 to testify about the nature and extent of the plaintiff's lead-caused injuries. Because the expert was experienced in treating lead-poisoned children and familiar with current lead-poisoning research and the IQ test used to assess the plaintiff, he was qualified to testify. A neuropsychologist's report, medical records, and other information regarding the plaintiff and the properties he lived at as a child were an adequate factual basis for the expert to opine about the cause of the plaintiff's cognitive impairments. Additionally, a study on IQ loss in lead-poisoned children provided a sufficient factual basis for the expert to testify about the plaintiff's IQ loss. Thus, the trial court abused its discretion in precluding the expert from testifying about medical causation on the grounds that he was not qualified and his opinion lacked an adequate factual basis.

Circuit Court for Baltimore City Case No.: 24-C-11-000954 Argued: February 6, 2017

IN THE COURT OF APPEALS

OF MARYLAND

No. 58

September Term, 2016

STEWART LEVITAS

v.

MICHAEL DAVON CHRISTIAN

Barbera, C.J. Greene Adkins McDonald Watts Getty Battaglia, Lynne A. (Senior Judge, Specially Assigned),

JJ.

Opinion by Adkins, J. Getty, J., dissents.

Filed: July 11, 2017

Issues about an expert's qualifications and foundation for his opinion are no strangers to appellate courts, and the complex issues of causation in lead paint cases generally require expert testimony, which is often challenged. Today we review a case in which the trial court excluded the plaintiff's expert witness—a ruling fatal to his claim. We consider whether it erred in doing so.

FACTS AND LEGAL PROCEEDINGS

Respondent Michael Christian was born on February 12, 1990. From his birth until October 1992, he resided with his mother, Nickolas Skinner ("Nickolas"), and grandmother, Betty Skinner ("Betty"),¹ at 3605 Spaulding Avenue ("Spaulding") in Baltimore City.² Christian and his mother then moved to 4946 Denmore Avenue ("Denmore") in October 1992, where they resided for almost a year. In September 1993, Christian and his mother moved back to Spaulding and lived there for another four years, until September 1997.

Christian's blood was tested eight times between November 1990 and October 1993. In April 1991, he exhibited an elevated free erythrocyte protoporphyrin ("FEP") level, which does not measure a child's blood lead level but is an initial screening test for lead exposure. From February 1992 to October 1993, Christian displayed elevated blood lead levels five times as follows:

¹ We use the Skinners' first names to avoid confusion. We mean no disrespect.

² Respondent Michael Christian's grandmother, Betty Skinner ("Betty"), leased 3605 Spaulding Avenue ("Spaulding") beginning in 1989. As of the date of her deposition on March 21, 2013, she still lived there.

Date Taken	Blood Lead Level ³	Christian's Address ⁴
February 20, 1992	9 μg/dL	Spaulding
February 18, 1993	10 μg/dL	Denmore
July 16, 1993	17 μg/dL	Denmore
September 2, 1993	12 μg/dL	Denmore
October 6, 1993	14 μg/dL	Spaulding

In 2011, Christian filed suit in the Circuit Court for Baltimore City against Petitioner Stewart Levitas, the owner of Spaulding when he lived there, alleging negligence and violations of the Maryland Consumer Protection Act.⁵ In February 2012, Arc Environmental, Inc. ("Arc") tested the interior and exterior of Spaulding for lead using x-

³ Blood lead levels are measured in micrograms per deciliter (μ g/dL) of blood. *See Standard Surveillance Definitions and Classifications*, Centers for Disease Control and Prevention, https://www.cdc.gov/nceh/lead/data/definitions.htm (last updated Nov. 18, 2016) [https://perma.cc/K4A8-ZDKG]. As of 2012, the Centers for Disease Control and Prevention considers blood lead levels greater than 5 μ g/dL to be elevated. *Id*.

⁴ We used the addresses and dates listed in Christian's Answers to Levitas's Interrogatories and Nickolas's deposition testimony as opposed to the addresses on the Maryland Department of Health and Mental Hygiene ("DHMH") lab reports because this is the residential history Christian's expert witness, Howard Klein, M.D., relied on when developing his lead source opinion. If we were to use the addresses on the DHMH lab reports, more of the reported elevated lead levels would correspond to his residence at Spaulding than at 4946 Denmore Avenue ("Denmore"). According to the lab reports, Christian lived at Denmore for the lead level reported on February 20, 1992 and lived at Spaulding for the three lead levels reported on February 18, July 16, and September 2, 1993.

⁵ Christian also sued the owners of Denmore. His claims against them were dismissed with prejudice.

ray fluorescence testing. Arc summarized its findings in a report for Christian ("Arc Report"). Thirty-one interior surfaces and five exterior surfaces tested positive for lead. The lead-positive interior surfaces included door jambs, baseboards, and window sills, casings, and sashes. Exterior window sashes, casings, and door jambs also tested positive for lead.

During discovery, Christian designated Howard Klein, M.D., a pediatrician with experience treating lead-poisoned children, as an expert witness who would opine on the source of Christian's lead exposure-source causation-and his lead-caused injuriesmedical causation. As to the source of Christian's lead exposure, Dr. Klein testified in his deposition that he was "of the opinion that [Christian] was exposed to lead-based paint" at Spaulding. The basis for his opinion was: (1) the age of Spaulding—built in 1944; (2) the Arc Report; (3) a Maryland Department of the Environment ("MDE") certification reflecting that the property was not lead free; (4) a Department of Housing and Community Development ("DHCD") violation that detailed the poor condition of the property; (5) Christian's elevated FEP and blood lead levels while he was living at Spaulding and Denmore; (6) Betty's and Nickolas's deposition testimony that Spaulding was in disrepair while Christian lived there; (7) Nickolas's testimony that she saw Christian touch areas where paint was peeling around the windowsills at Spaulding; and (8) Nickolas's testimony that Christian stayed at Spaulding under the supervision of family members while she was at work during the day, both while they were living at Spaulding and while they were living at Denmore. Dr. Klein further testified that these facts establish that "there was lead-based

paint [at Spaulding]." Finally, he acknowledged that Denmore was also a source of Christian's lead exposure.

In his expert report on medical causation, Dr. Klein concluded "within [a] reasonable degree of medical certainty" that lead caused Christian's mental retardation, impaired cognition, and learning disabilities. He further opined in his deposition that as a result of Christian's exposure to lead, he lost 7.4 to 9.4 IQ points. Dr. Klein based his opinion on: (1) a neuropsychological evaluation of Christian by Barry Hurwitz, Ph.D.; (2) Christian's medical records; (3) Christian's Answers to Interrogatories; (4) information on Spaulding and Denmore; (5) Christian's Maryland Department of Health and Mental Hygiene ("DHMH") lead testing records; (6) MDE records; (7) DHCD records; and (8) Christian's school records. To calculate Christian's IQ loss, he relied on the Lanphear study,⁶ which found that children with certain average lifetime blood lead levels lost a specific number of IQ points. Dr. Klein averaged Christian's blood lead levels and then determined his loss in IQ points based on the study's results.

Levitas filed a motion to exclude Dr. Klein from testifying about source causation on the grounds that he lacked both the necessary qualifications and a sufficient factual basis for his opinion.⁷ Levitas also moved for summary judgment in his favor if Dr. Klein were excluded.

⁶ Richard L. Canfield et al., *Intellectual Impairment in Children with Blood Lead Concentrations Below 10 μg per Deciliter*, 348 New Eng. J. of Med. 1517 (2003).

⁷ Levitas also moved to exclude the Arc Environmental, Inc. test results ("Arc Report") and "any testimony related thereto." The Circuit Court for Baltimore City denied this motion. Levitas has not appealed that decision.

On July 10, 2013, the Circuit Court held a hearing on Levitas's motion to exclude Dr. Klein. At the hearing, Levitas argued that Dr. Klein should be precluded from testifying about both source causation and medical causation. Ruling from the bench, the hearing judge excluded Dr. Klein's testimony on both of these topics. The court reasoned that Dr. Klein should be prevented from testifying about the source of Christian's lead exposure because "he did not, or had very little . . . information concerning other sources [of lead exposure]."⁸ It also precluded Dr. Klein from testifying about the cause and extent of Christian's injuries because he was not qualified and his opinion lacked a sufficient factual basis under Maryland Rule 5-702. As to his qualifications, the court reasoned that Dr. Klein would not be able to explain the IQ test results to the jury because he does not use the test in his own practice. As to his factual basis, the court explained that Dr. Klein relied on information from Dr. Hurwitz and Christian's attorney in developing his opinion, rather than examining Christian himself, which was not sufficient. The Circuit Court declined to grant Levitas's motion for summary judgment, however, because the Arc Report was "direct evidence" of lead at Spaulding.

On August 20, 2013, the Circuit Court entered a written order precluding Dr. Klein from offering expert opinions on "source, IQ loss, alleged injuries due to lead, or other causation issues."⁹ For the purposes of appealing the Circuit Court's decision to exclude

⁸ The Circuit Court excluded Dr. Howard Klein's lead-source causation testimony because he lacked a sufficient factual basis for his opinion, not because he was not qualified to offer an opinion on the subject.

⁹ When the Circuit Court's written order was entered, it erroneously denied Levitas's motion to exclude Dr. Klein. Levitas timely filed a motion for reconsideration,

Dr. Klein, the parties agreed that without Dr. Klein's testimony, Christian could not make out a prima facie case of negligence because he could not establish medical causation. Therefore, the parties requested that the Circuit Court enter summary judgment in Levitas's favor to allow Christian to appeal the expert's exclusion.¹⁰ The court granted the request, and Christian appealed.

In the first of two Court of Special Appeals opinions, the intermediate appellate court affirmed the Circuit Court's decision to exclude Dr. Klein. Christian appealed to this Court, and we, in a per curiam order, vacated the judgment and remanded the case for reconsideration in light of *Roy v. Dackman*, 445 Md. 23 (2015), *reconsideration granted*, (Nov. 24, 2015). *Christian v. Levitas*, 445 Md. 240 (2015). On remand, the Court of Special Appeals, in an unreported opinion, reversed the Circuit Court's decision to exclude Dr. Klein. *Christian v. Levitas*, 2016 WL 4076100, at *6 (Md. Ct. Spec. App. Aug. 1, 2016). It concluded that Dr. Klein was qualified and had a sufficient factual basis to opine that Christian was exposed to lead at Spaulding and that lead caused his injuries. *Id.* at *4–*5. Levitas appealed.

We granted *certiorari* to answer the following questions:¹¹

requesting that the court amend the order to reflect its ruling from the bench. The court granted Levitas's motion.

¹⁰ The parties entered into an agreement which provided that "[Christian] intends to appeal the order(s) excluding Dr. Klein's testimony, arguing . . . that [he] is qualified to offer testimony as to the source and cause of [Christian]'s injuries due to lead ingestion, and also that Dr. Klein had a sufficient factual basis for his testimony."

¹¹ We have rephrased the two questions presented in Levitas's Petition for a Writ of Certiorari. His Petition included the following questions:

- 1. Did the trial court err in excluding Dr. Klein's testimony regarding lead-source causation?
- 2. Did the trial court err in excluding Dr. Klein's testimony regarding medical causation?

Because we answer these questions in the affirmative, we shall affirm the judgment of the Court of Special Appeals.

STANDARD OF REVIEW

It is often said that decisions to admit or exclude expert testimony fall squarely within the discretion of the trial court. *See, e.g., Bryant v. State*, 393 Md. 196, 203 (2006) (collecting cases). A discretionary ruling, however, is not boundless and must be tethered to reason. We have explained that an abuse of discretion is "**discretion manifestly unreasonable, or exercised on untenable grounds, or for untenable reasons.**" *Neustadter v. Holy Cross Hosp. of Silver Spring, Inc.*, 418 Md. 231, 241 (2011) (emphasis added) (quoting *Touzeau v. Deffinbaugh*, 394 Md. 654, 669 (2006)). Appellate courts will not affirm a trial court's discretionary rulings "when the judge has resolved the issue on

Whether the Court of Special Appeals erred in reconsidering all issues in this case when this Court's order for "reconsideration in light of *Roy* [v. Dackman, 445 Md. 23 (2015), reconsideration granted, (Nov. 24, 2015),]" should have only impacted the issue of expert qualifications.

^{2.} Whether the trial court abused its discretion in excluding Dr. Klein's testimony where the record showed that Dr. Klein did not have a sufficient factual basis to support either his opinion as to the source of lead exposure or the cause and extent of Mr. Christian's alleged injuries.

unreasonable or untenable grounds."¹² *Id.* (internal quotation marks omitted). Such grounds include "when a trial judge exercises discretion in an arbitrary or capricious manner or when he or she acts beyond the letter or reason of the law." *Garg v. Garg*, 393 Md. 225, 238 (2006) (citation omitted). The trial court must apply the correct legal standard and "a failure to consider the proper legal standard in reaching a decision constitutes an abuse of discretion." *Neustadter*, 418 Md. at 242 (emphasis added).

Below we examine the Circuit Court's rationale for excluding a crucial expert witness to assess whether it abused its discretion.

DISCUSSION

Levitas contends that the Circuit Court correctly excluded most of Dr. Klein's

testimony because he lacked a sufficient factual basis to opine about the source of

¹² Not all evidentiary rulings are reviewed for an abuse of discretion. Judge McDonald, writing for the Court, explained the applicable standards of review for these rulings in *Mathews v. Cassidy Turley Maryland, Inc.*, 435 Md. 584 (2013):

Some matters, such as the weighing of the relevance of proffered evidence as against unfair prejudice or other considerations, are left to the "sound discretion" of the trial court. Such decisions will be reversed only for abuse of discretion. Other evidentiary rulings are based on a "pure legal question." In those circumstances, an appellate court considers the legal question without deference to the decision of the trial court.

Id. at 599 (citations omitted). In that case, we reviewed *de novo* the trial court's decision to exclude a bank examiner's report on the grounds that it was inadmissible hearsay. *Id.* at 628–32.

Christian's lead exposure and the nature and extent his injuries related to such exposure.¹³ Christian flatly disagrees.

Expert testimony is meant to assist the jury in resolving an issue outside the average person's realm of knowledge. *Roy*, 445 Md. at 41 (citing *Radman v. Harold*, 279 Md. 167, 169 (1977)). Under Maryland Rule 5-702, expert testimony "may be admitted, in the form of an opinion or otherwise, if the court determines that the testimony will assist the trier of fact to understand the evidence or to determine a fact in issue." The court bases this determination on three factors: "(1) whether the witness is qualified as an expert by knowledge, skill, experience, training, or education[;] (2) the appropriateness of the expert testimony on the particular subject[;] and (3) whether a sufficient factual basis exists to support the expert testimony." Md. Rule 5-702.¹⁴

¹³ Levitas also argues that the Court of Special Appeals should have only reconsidered Dr. Klein's qualifications, and not the factual basis for his testimony. Specifically, Levitas contends that *Roy* "did not evaluate the factual basis underpinning the expert's opinions," and therefore it has no bearing on the outcome of this case. Levitas misreads *Roy*. The Court found the plaintiff's expert, Eric Sundel, M.D., competent to testify about the plaintiff's injuries based on his "academic and experiential qualifications" and the materials he relied on. *Id.* at 49–52. We held that Dr. Sundel was not competent to testify, however, regarding the source of the plaintiff's lead exposure because he lacked a sufficient factual basis. His opinion was "based solely on scant circumstantial evidence, including the age of the home and exterior tests of the paint on the dwelling at [the subject property]." *Roy*, 445 Md. at 47. Because our order instructed the Court of Special Appeals to reconsider its opinion "in light of *Roy*," without further instruction to confine its analysis to Dr. Klein's qualifications under 5-702(1), it was proper, on remand, for it to include consideration of the factual basis for Dr. Klein's source testimony.

¹⁴ This case implicates the first and third factors, although our discussion reverses that order.

We have repeatedly explained that an expert may be qualified to testify if he "is reasonably familiar with the subject under investigation." *Roy*, 455 Md. at 41 (emphasis added) (quoting *Radman*, 279 Md. at 169). This familiarity can come from "professional training, observation, actual experience, or any combination of these factors." *Radman*, 279 Md. at 169. An expert, therefore, does not need to have hands-on experience with the subject about which he proposes to testify. *Id.* at 170–71 (citations omitted). The oftencited illustration of this concept is a law professor who is an expert in trial procedure even though she has never tried a case. *Id.* at 171 (citation omitted). Similarly, a doctor may be qualified to testify as a medical expert even though she does not have experience with a particular procedure or area of specialization. *Id.*

An expert's testimony is admitted "because it is based on his special knowledge derived not only from his own experience, but also from the experiments and reasoning of others, communicated by personal association or through books or other sources." *Id.* at 170 (citation omitted). "It is sufficient if the court is satisfied that the expert has in some way gained such experience in the matter as would entitle his evidence to credit." *Id.* at 169 (citation omitted). A trial court may not exclude an expert if "his reading can be assumed to constitute part of his general knowledge adequate to enable him to form a reasonable opinion of his own." *Id.* at 170 (citation omitted).

Expert testimony must also have an adequate factual basis so that it is "more than mere speculation or conjecture." *Exxon Mobil Corp. v. Ford*, 433 Md. 426, 478, *as supplemented on denial of reconsideration*, 433 Md. 493 (2013) (citation omitted). If an expert's conclusions are not supported by an adequate factual basis, his opinion has no

probative force. *Beatty v. Trailmaster Prod., Inc.*, 330 Md. 726, 741 (1993) (citation omitted). The probative value of an expert's testimony is directly related to the "soundness of [the] reasons given" for his conclusions. *Id.* (citation omitted). An adequate factual basis requires: (1) an adequate supply of data; and (2) a reliable methodology for analyzing the data. *Roy*, 445 Md. at 42–43 (citation omitted); *Ford*, 433 Md. at 478 (citation omitted). In addition, if the facts and data that an expert relies on are "of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject," they need not be independently admissible at trial. Md. Rule 5-703(a).

In assessing the expert-witness factors, the trial court is only concerned with whether the expert's testimony is admissible. "[O]bjections attacking an expert's training, expertise or basis of knowledge go to the weight of the evidence and not its admissibility." *Baltimore Gas & Elec. Co. v. Flippo*, 112 Md. App. 75, 98 (1996), *aff'd*, 348 Md. 680 (1998) (citation omitted). An expert's qualifications and methods may be teased out during cross-examination, and the jury can then assess how much weight to give his testimony. *Roy*, 445 Md. at 43. "Even if a witness is qualified as an expert, the fact finder need not accept the expert's opinion." *Walker v. Grow*, 170 Md. App. 255, 275 (2006).

Lead-Source Causation

The third factor in Rule 5-702—"sufficient factual basis"—garners the most debate between the parties. The Circuit Court restricted Dr. Klein's testimony on the ground that he did not have a "substantial factual basis" for his opinion that lead inside Spaulding caused Christian's elevated blood lead levels because he lacked "information concerning other possible sources." Levitas asks us to affirm this ruling. Relying on *Ross v. Housing* *Authority of Baltimore City*, 430 Md. 648 (2013), Levitas argues that Dr. Klein could not conclude that Spaulding was a source of Christian's lead exposure because he did not consider other properties or conduct an independent investigation.¹⁵ We are not persuaded.

Ross lends scant support to Levitas—markedly more facts underlie Dr. Klein's opinion than were present in that case. In *Ross*, lead testing was conducted on the subject property, but the testing only detected lead-based paint on the exterior and one interior surface. *Ross*, 430 Md. at 654–55. The testimony of the expert, Pamela Blackwell-White, M.D., was quite equivocal—saying that if there was any lead-based paint in a property, she assumed it was the most probable source of lead exposure "until proven otherwise,"

¹⁵ Levitas also relies heavily on City Homes, Inc. v. Hazelwood, 210 Md. App. 615 (2013). There, the plaintiff identified three properties as possible sources of lead exposure, but he only provided his expert witness, Eric Sundel, M.D., with information on one of them. Id. at 689. This information included Arc test results that found three lead-positive exterior surfaces and 19 lead-positive interior surfaces. Id. at 624–25. Based upon these results, Dr. Sundel opined that the property was a reasonably probable source of the plaintiff's lead exposure. Id. at 688. Because he relied on the report and ignored other possible sources of lead exposure, the Court of Special Appeals concluded that Dr. Sundel lacked a sufficient factual basis for his lead-source opinion. Id. at 687-89. But here, Dr. Klein neither ignored the other identified possible source of Christian's lead exposure nor relied solely on the 2012 Arc Report. Indeed, one of the reasons he concluded that Spaulding was a source of Christian's lead exposure was that his FEP and blood lead levels were first found to be elevated while he was living at Spaulding, even though his blood lead levels were also elevated while he was living at Denmore. Additionally, we have never held that an expert witness cannot rely on information obtained from other sources. All that we require is an adequate supply of data and a reliable methodology for assessing that data. Roy, 445 Md. at 42-43 (citation omitted); Exxon Mobil Corp. v. Ford, 433 Md. 426, 478, as supplemented on denial of reconsideration, 433 Md. 493 (2013) (citation omitted). To the extent that *Hazelwood* is inconsistent with this proposition, we disagree with that aspect of its analysis.

especially if it was built before 1970.¹⁶ *Id.* at 660. Importantly, she testified that "she was merely identifying 'potential risk' and could not make any statement as to causation with certainty." *Id.* at 664. We concluded that she lacked an adequate factual basis to opine that the subject property was the source of the plaintiff's lead exposure. *Id.* at 663. We reasoned that because Dr. Blackwell-White could not explain how she weighed certain pieces of information in reaching her conclusion, her opinion would confuse rather than assist the trier of fact. *Id.*

By contrast, Dr. Klein concluded—with a reasonable degree of medical certainty that Spaulding was a reasonably probable source of Christian's lead exposure for several reasons:

• The 2012 Arc Report found that 31 interior locations and five exterior locations tested positive for lead;

- Lead paint was banned federally in 1978, and therefore it was unlikely that Spaulding had been painted with lead-based paint **since** Christian lived there in the 1990s;
- DHCD records described the poor condition of the property;¹⁷
- An MDE certification indicated that Spaulding was not lead free;

¹⁷ In Dr. Klein's deposition testimony, he acknowledged that the Department of Housing and Community Development ("DHCD") records were from after Christian lived at Spaulding. But given Betty's and Nickolas's testimony about the poor condition of Spaulding while Christian lived there and the lack of evidence of repairs in the intervening years, it was reasonable for Dr. Klein to consider these records.

¹⁶ Evidence also showed that the plaintiff in *Ross v. Housing Authority of Baltimore City*, 430 Md. 648 (2013), could have been exposed to lead from several possible sources, but the expert, Pamela Blackwell-White, M.D., concluded that the subject property was the only source of the plaintiff's lead exposure. *Id.* at 664. In this case, by contrast, Denmore was the only other possible source identified—and the facts show that Dr. Klein considered it when he reached his conclusion.

- Christian's FEP and blood lead levels were first found to be elevated while he was living at Spaulding, when he had not yet lived anywhere else;
- Family members testified that Spaulding was in a deteriorated condition while Christian was living there and that Christian touched peeling paint at the property; and
- Christian regularly stayed at Spaulding during the day while his mother was at work, both when he lived there and when he lived at Denmore.

Dr. Klein acknowledged that Denmore was also a source of Christian's lead exposure. Thus, unlike the expert in *Ross*, he did not jump to the conclusion that Spaulding was a source merely because it contained lead paint.¹⁸ Spaulding's lead testing was one of multiple facts that Dr. Klein considered when developing his lead-source opinion.

The Dissent claims that expert witnesses in lead paint cases must exclude other properties to opine that a particular property was a substantial contributing factor to the

¹⁸ Levitas makes two additional points. He asserts that the Arc Report is not direct evidence of "lead paint hazards" while Christian lived at Spaulding, but merely evidence of the presence of lead at the property in 2012. He contends that there must be contemporaneous evidence of such hazards, like citations from the Baltimore Housing Department, for Dr. Klein to have a sufficient factual basis to conclude that Spaulding was a reasonably probable source of Christian's lead exposure. We have never imposed such a requirement. Rather, the adequacy of an expert's factual basis turns on whether he had a sufficient supply of data and a reliable methodology. *Roy*, 445 Md. at 42–43 (citation omitted); *Ford*, 433 Md. at 478. As we explained, *supra*, Dr. Klein's source causation opinion satisfied these requirements.

Levitas also claims that "Christian targeted [Spaulding], then provided Dr. Klein with information pertaining only to that property." Levitas mischaracterizes the record. Dr. Klein's own report lists the records that he reviewed in developing his opinion. On that list is "[p]roperty information for 3605 Spaulding Avenue [and] 4946 Denmore Avenue."

plaintiff's injuries. Dissent Slip Op. at 22–23. It also contends that the plaintiff must establish that "the subject property was a more probable source" of his injuries than other possible sources. *Id.* at 5. Both of these assertions stem from a fundamental misunderstanding of the substantial factor test. The substantial factor test applies when "two or more independent negligent acts bring about an injury." Pittway Corp. v. Collins, 409 Md. 218, 244 (2009). Under the test, an actor's conduct is a cause-in-fact of the plaintiff's injuries when it is "a substantial factor in bringing about the harm." Id. (quoting Restatement (Second) of Torts § 431 (Am. Law Inst. 1965)). The substantial factor test does not require experts to exclude other properties as possible contributing sources or the plaintiff to show that one cause had a greater impact than any other substantial factor causing the harm. See Eagle-Picher Indus., Inc. v. Balbos, 326 Md. 179, 209 (1992). It would be illogical for us to require an expert to narrow the plaintiff's lead exposure down to a single source when the substantial factor test, by its very definition, permits more than one cause of injury.

The discretion accorded to trial judges in evidentiary rulings calls for an exercise of judgment using applicable legal standards. *Neustadter*, 418 Md. at 241–42. Here, the trial court excluded Dr. Klein's proffered testimony about source causation because he had "very little . . . information concerning other sources [of lead exposure]." In doing so, it thus relied on a purported rule of law that an expert must exclude other properties before he can testify that the plaintiff was exposed to lead at the subject property. But, as discussed *supra*, this is not the rule. Moreover, in *Hamilton v. Kirson*, 439 Md. 501 (2014), we dismissed concerns over the experts being "provided with little information on other

potential sources of lead exposure." *Id.* at 544. We explained, "[T]here may be other ways that an injured plaintiff may establish that it was probable that the interior of a subject house contained lead" besides eliminating other possible sources of lead exposure. *Id.* We have only required that an expert be able to adequately explain how he determined that a property was a source of the plaintiff's lead exposure so that the trier of fact can evaluate his reasoning. *Ross*, 430 Md. at 663–64 (citation omitted). By relying on the wrong legal standard, the trial court abused its discretion.

Medical Causation

The first factor of Rule 5-702—qualification by knowledge, skill, experience, training, or education—comes into play as we consider the Circuit Court's exclusion of Dr. Klein's testimony about the cause of Christian's injuries. Although the parties dispute the exact grounds for this ruling, our examination of the record reveals that the Circuit Court precluded Dr. Klein from testifying about Christian's injuries both on the grounds that he was not qualified and that he lacked an adequate factual basis. We assess both grounds below.

Levitas takes issue with the factual basis for Dr. Klein's opinion that lead poisoning caused "[m]ental [r]etardation" and "[i]mpaired cognition" in Christian. He argues that Dr. Klein should have conducted his own examination of Christian, rather than relying on Dr. Hurwitz's report, scientific research, Christian's school records, discovery materials, and deposition testimony. This argument reflects Levitas's misunderstanding about the nature of—and boundaries for—expert testimony.

In a leading case on expert witness qualifications, *Radman v. Harold*, we held that the trial court erred in precluding an internal medicine specialist from testifying about the standard of care for a hysterectomy because he had not "performed any surgery of any kind, let alone in the specialty of gynecology and urology." 279 Md. at 174. There, we explained, "[W]e perceive no reason why a person who has acquired sufficient knowledge in an area should be disqualified as a medical expert *merely* because he is not a specialist" *Id.* at 171 (emphasis in original).

We recently reiterated in *Roy* the principle from *Radman*—that an expert witness is "not required necessarily to be a specialist" or have "specialized knowledge," but her opinion must be based on "reliable knowledge, skill, and experience." *Roy*, 445 Md. at 43, 50; *see also* Md. Rule 5-702(1). In *Roy*, the expert witness, Eric Sundel, M.D., a board-certified pediatrician, had never studied or treated an individual with lead poisoning, but was well-read on lead poisoning and its effects on children.¹⁹ *Roy*, 445 Md. at 33, 35. He testified in his deposition that lead exposure at the subject property had caused the plaintiff to suffer a loss of IQ points, impaired attention, and problems with memory and coordination. *Id.* at 33. Although we acknowledged that Dr. Sundel "may not be the most qualified expert witness on medical causation," we nevertheless concluded that he was competent to testify about medical causation, and the trial court abused its discretion in excluding him. *Id.* at 43–44.

¹⁹ Dr. Sundel is the same expert the Court of Special Appeals held was properly excluded in *Hazelwood*. The *Roy* Court distinguished the record in that case from the record in *Roy*, noting that he had "endeavored to be more specific and shore-up the supposed deficiencies in his qualifications." *Roy*, 445 Md. at 50.

The record in this case establishes that Dr. Klein has the "knowledge, skill, experience, training, or education" required under Rule 5-702(1). During his deposition, Dr. Klein testified that he was an attending physician at the University of Maryland for 25 years, during which time he treated lead-poisoned children. Additionally, he testified that he helps doctors in Israel, where he now practices, rule out lead poisoning as a cause of illness. He is also well-acquainted with Centers for Disease Control and Prevention and American Academy of Pediatrics literature on lead poisoning, and he has been testifying as an expert witness in lead paint cases since 1995.

The Circuit Court precluded Dr. Klein from testifying about Christian's IQ loss on the grounds that he did not administer the "particular type of IQ test" that Dr. Hurwitz used in his own practice and he is "not able to explain to the jury how [] the psychologist got to [his] results." But physicians are often knowledgeable about many tests, even those they do not use. Knowledge about a broad spectrum of available tests is part of the training received by a physician—and this knowledge need not be acquired through hands-on experience. *Radman*, 279 Md. at 170–71. In the lead paint litigation context, *Roy* makes clear that an expert need not administer the IQ test to be competent to testify that lead exposure caused a loss in IQ. In *Roy*, Dr. Hurwitz provided a neuropsychological report on the plaintiff. The expert, Dr. Sundel, did not administer the IQ test. Instead, he relied on Dr. Hurwitz's report to conclude that the plaintiff suffered a loss of IQ points and other attention and memory impairments. *Roy*, 445 Md. at 33. We nevertheless held that Dr. Sundel was qualified to testify about the plaintiff's injuries. *Id.* at 52.

Like Dr. Sundel, Dr. Klein developed his opinion based in part on Dr. Hurwitz's neuropsychological evaluation of Christian. Moreover, the record reflects that Dr. Klein was indeed familiar with and had previously graded the IQ test. He testified in deposition that he was "familiar enough with [the IQ test] to know how the test was generated," had seen several editions of different IQ tests, and "[knew] the testing pretty intimately." In short, Dr. Klein had ample knowledge, training, and experience to be qualified as an expert under Rule 5-702(1). We see no sustainable reason why the trial court would conclude otherwise.

We next focus on whether Dr. Klein had a sufficient factual basis to testify as to Christian's IQ loss. Levitas submits that the court properly excluded Dr. Klein's testimony and takes issue with his reliance on Dr. Hurwitz's neuropsychological report in developing his medical causation opinion, without meeting Christian, his family, his teachers, or his treating physicians. He also argues that Dr. Klein cannot calculate Christian's IQ loss using the Lanphear study because it is population-based, and therefore cannot be used to calculate an individual's IQ loss.

As we have established, an expert can rely on facts and data "of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject." Md. Rule 5-703(a). An expert's factual basis "may arise from a number of sources, such as facts obtained from the expert's first-hand knowledge, facts obtained from the testimony of others, and facts related to an expert through the use of hypothetical questions." *Sippio v. State*, 350 Md. 633, 653 (1998); *see also Rollins v. State*, 161 Md. App. 34, 86 (2005), *aff'd*, 392 Md. 455 (2006) (an autopsy report prepared by another

doctor provided a sufficient factual basis for a medical expert to opine on the victim's cause of death). In *Roy*, this Court concluded that Dr. Sundel, who had also relied on a report from Dr. Hurwitz, was competent to testify regarding the medical causation of the plaintiff's injuries. *Roy*, 445 Md. at 51. Here, Dr. Klein similarly relied on a report from Dr. Hurwitz in developing his opinion on Christian's lead-caused injuries. Based on our conclusion in *Roy*, Dr. Klein's reliance was proper—and the Circuit Court arbitrarily exercised its discretion to exclude his testimony on that basis.

In *Roy*, Dr. Sundel also used the Lanphear study to calculate the plaintiff's individual IQ loss. The *Roy* defendants argued that the study could not provide a sufficient factual basis for Dr. Sundel's IQ-loss opinion because other reputable studies contradicted the Lanphear study's results and cautioned against using it to calculate individual IQ loss. *Roy*, 445 Md. at 51–52 n.16. We rejected this argument, explaining that "reliance on the Lanphear study does not invalidate the entire basis of [an expert's] opinion, even if the Lanphear study is contrary to the results of other studies Such is the grist for cross-examination and dueling experts and for resolution by the relative weight assigned by the fact-finder."²⁰ *Id.* at 52. We reject Levitas's argument for the same reasons.

Finally, Levitas contends that Dr. Klein lacked a sufficient factual basis for his opinion that Christian has "impaired cognition" due to: (1) a 10-point difference between the IQ scores computed for Christian by Dr. Hurwitz and the defense expert; and (2) Dr.

²⁰ We also acknowledged that the Lanphear study "has been cited to and discussed extensively by other studies employing similar tests relating to IQ loss and childhood lead poisoning." *Roy*, 445 Md. at 51; *see also id.* at n.16 (listing some of the books and journals that have cited the Lanphear study).

Klein's acknowledgment that there is no evidence of Christian being diagnosed with an "attention impairment" or a learning disability.²¹ But these fact-based arguments go to the weight of Dr. Klein's testimony, not its admissibility. *See Ford*, 433 Md. 426 at 481 (rejecting the argument that an expert's testimony was inadmissible because he did not reach the same conclusions as the other party's expert using the same data); *Roy*, 445 Md. at 43 ("Cross-examination is the usual crucible for persuading the fact-finder which witness merits the greater weight."). As long as an expert's opinion will assist the trier of fact in understanding the evidence or determining a fact at issue, he should be permitted to testify. *See* Md. Rule 5-702. Dr. Klein's testimony would aid the jury in assessing the extent of Christian's alleged injuries because determining a person's IQ and calculating potential IQ loss are beyond the scope of the average juror's realm of knowledge.

CONCLUSION

Because Dr. Klein is competent to testify about lead-source causation and medical causation, the Circuit Court erred when it excluded his testimony. Therefore, we affirm the judgment of the Court of Special Appeals.

JUDGMENT OF THE COURT OF SPECIAL APPEALS AFFIRMED. COSTS TO BE PAID BY THE PETITIONER.

²¹ Levitas claims that "Dr. Klein conceded that the results of Dr. Hurwitz's evaluation of Christian were 'suspect'" because Christian admitted to using marijuana and alcohol daily. Therefore, Levitas contends, Dr. Hurwitz's report could not provide an adequate factual basis for Dr. Klein's testimony. Levitas has taken Dr. Klein's testimony out of context. Speaking only to marijuana use, Dr. Klein testified that the "memory function" portion of Dr. Hurwitz's report "might be suspect." This is grist for cross-examination and does not affect admissibility.

Circuit Court for Baltimore City Case No.: 24-C-11-000954 Argued: February 6, 2017

IN THE COURT OF APPEALS

OF MARYLAND

No. 58

September Term, 2016

STEWART LEVITAS

V.

MICHAEL DAVON CHRISTIAN

Barbera, C.J. Greene Adkins McDonald Watts Getty Battaglia, Lynne A. (Senior Judge, Specially Assigned),

JJ.

Dissenting Opinion by Getty, J.

Filed: July 11, 2017

I respectfully dissent from the Majority's conclusion that Howard Klein, M.D., the pediatrician expert witness offered by the Respondent, Michael Christian, offered a sufficient factual basis for his opinion that lead-based paint inside the property owned by Stewart Levitas, Petitioner, at 3605 Spaulding Avenue ("the Spaulding Property"), was a substantial factor cause of Mr. Christian's harm from lead poisoning. See Majority Slip Op. at 11-16. Although I agree with the Majority that evidence in the record may have been sufficient for Dr. Klein to reasonably conclude that Mr. Christian "was exposed to lead-based paint at the [Spaulding Property]," Dr. Klein did not adequately explain the methodology by which he reached that conclusion. And, the record does not show that Dr. Klein had an adequate supply of data, or offered any methodology in support of his opinion that it was Mr. Christian's exposure to lead-based paint at the Spaulding Property that was the substantial factor cause of his elevated blood lead levels and injuries from lead paint poisoning, as opposed to his period of residency at another property at which he resided as a child, 4946 Denmore Avenue ("the Denmore Property"), which Dr. Klein agreed also appeared to be a source of lead ingested by Mr. Christian.

Maryland courts have consistently held that an expert lacks an adequate factual basis for an opinion as to source causation in a lead paint case unless the expert can show an adequate supply of data and describe the methodology that enabled the expert to rule out other reasonably probable sources of the plaintiff's lead exposure and elevated blood lead levels, and thereby show that it was the defendant's property that was the substantial factor cause of the plaintiff's lead poisoning. As this Court held in its recent opinion in *Roy v*. *Dackman*, "it is not enough for an expert to conclude that a certain property is the source of the child's exposure to lead when other probable sources have not been eliminated." 445 Md. 23, 48 (2015). Indeed, we specifically held that expert opinion testimony as to source causation that does not exclude other probable sources is "as likely to confuse as to assist a jury." *Id.* (quoting *Ross v. Hous. Auth. of Balt. City*, 430 Md. 648, 664 (2013)).

As Dr. Klein failed to provide a factual basis adequate to exclude the Denmore Property as a probable source of Mr. Christian's harm, as required by *Roy*, and did not describe the methodology he used to reach his opinions as to lead source causation, I would affirm the trial court's grant of the motion to exclude his testimony regarding lead source causation. Therefore, I respectfully dissent.

A. Causation in Lead Paint Litigation

When a plaintiff raises a negligence claim alleging injury from the presence of leadbased paint in a property owned by a defendant, the plaintiff bears the burden of proof for all essential elements of that claim, including "that the defendant's negligence was a proximate cause of the accident or injury." *Hamilton v. Kirson*, 439 Md. 501, 526 (2014) (quoting *Peterson v. Underwood*, 258 Md. 9, 15 (1970)). One aspect of proximate cause is causation-in fact or, in other words, "whether [a] defendant's conduct actually produced an injury." *Id.* When there are two or more independent possible causes of an injury, courts apply the "substantial factor" test to determine whether a defendant's conduct produced the injury. This Court first applied the substantial factor test in a lead paint case in *Ross v*. *Housing Authority of Baltimore City*, 430 Md. 648 (2013). In *Ross*, we explained that substantial factor causation in a lead paint case "can be conceived as a series of links:"

(1) the link between the defendant's property and the plaintiff's exposure to lead; (2) the link between specific exposure to lead and the elevated blood lead levels, and (3) the link between those blood lead levels and the injuries allegedly suffered by the plaintiff. To be a substantial factor in causing [a plaintiff's] alleged injuries, the [subject property] must have been a source of [the plaintiff's] exposure to lead, that exposure must have contributed to the elevated blood lead levels, and the associated increase in blood lead levels must have been substantial enough to contribute to her injuries.

Ross, 430 Md. at 668. The three links described in *Ross* can be labelled as "(1) source, (2) source causation, and (3) medical causation." *Rogers v. Home Equity USA, Inc.*, No. 57, Sept. Term 2016, Majority Slip Op. at 11. This Court later clarified that in order to establish the first "source" link in the chain, "the plaintiff must tender facts admissible in evidence that, if believed, establish two separate inferences: (1) that the property contained lead-based paint, and (2) that the lead-based paint at the subject property was a substantial contributor to the victim's exposure to lead." *Kirson*, 439 Md. at 529-30.

A plaintiff may establish the required causation links in a lead paint case through either direct or circumstantial evidence. *Id.* at 527. This Court has endorsed two separate theories whereby a plaintiff may rely on circumstantial evidence to establish the first two of the *Ross* links, "source" and "source causation." Under a *Dow* theory, first articulated by the Court of Special Appeals in *Dow v. L & R Properties, Inc.*, a plaintiff may establish that a property was the source of lead exposure, and that the exposure at that property caused elevated blood lead levels, if the plaintiff can "rule out" other reasonably probable sources of lead exposure, and thereby show that the subject property is the "only possible" source of the plaintiff's lead exposure. 144 Md. App. 67, 75-76 (2002). *See also Kirson*, 439 Md. at 530-37 (discussing *Dow* and cases applying a *Dow* theory of causation). And, under a theory first articulated in a *dicta* hypothetical in *Hamilton v. Kirson*, 439 Md. at 537-38, and subsequently adopted in *Rogers v. Home Equity USA, Inc.*, this Court has held that at the summary judgment stage of litigation, even without excluding other reasonable probable sources of lead, a plaintiff may "rule in" a defendant's property as a source of lead exposure, and that the exposure was a "reasonably probable source" of the plaintiff's elevated blood lead levels. No. 57, Sept. Term 2016, Majority Slip Op. at 13, 21.

I dissented from this Court's endorsement and application of a new theory of causation in *Rogers*. In part, that dissent was based on my view that, the proper standard of proof under which a plaintiff's case should be scrutinized at the summary judgment stage is whether the plaintiff has shown that it was "more probable than not" that a particular property was a substantial factor cause of his exposure to lead and elevated blood lead levels, as opposed to a "reasonable probability."¹ *Rogers*, Dissenting Slip Op. at 10-15. But, of greater significance to the motion to exclude at issue in this case, I also

¹ In the context of lead paint litigation, the Court first distinguished a "reasonable probability," which it equated to a "fair likelihood," from a more stringent "more probable than not" standard in *Rowhouses, Inc. v. Smith*, 446 Md. 611 (2016). In that case, the Court explained that "a reasonable probability is less than more likely than not, but more than a possibility." *Id.* at 659.

disagreed with the *Rogers* Majority's narrow focus on evidence as to the subject property owned by the defendant, when other evidence in the record indicated that another property was an equally likely source of the plaintiff's harm. *Id.* at 15-19. In my view, when there are multiple potential sources of a plaintiff's exposure to lead-based paint and elevated blood lead levels, each of which is more than a mere possible source of the harm, and the plaintiff has claimed that only one of them was the source of his harm, the plaintiff must, at a minimum, show that the subject property was a more probable source of that exposure and elevated blood lead levels than the other potential source(s) in order to establish that the subject property was a substantial factor cause of his harm. *Id. See also Peterson v. Underwood*, 258 Md. 9, 17 (1970) (holding that "where plaintiff by his own evidence shows two or more equally likely causes of the injury, for only one of which defendant is responsible, plaintiff can not recover").

The Majority in this case asserts that the standard which I described in my dissent in *Rogers* "stem[s] from a fundamental misunderstanding of the substantial factor test." *See* Majority Slip Op. at 14-15. The Majority notes that the substantial factor test "applies when 'two or more independent negligent acts bring about an injury." *Id.* (quoting *Pittway Corp. v. Collins*, 409 Md. 218, 244 (2009)). As "the substantial factor test, by its very definition, permits more than one cause of injury," the Majority concludes that "[i]t would be illogical for us to require an expert to narrow the plaintiff's lead exposure down to a single source." *Id.*

A plaintiff may certainly raise a claim under the substantial factor test that there was more than one cause of his harm. As I noted in a footnote in my *Rogers* dissent, in a lead paint negligence case a plaintiff may claim "that the defendant's property is *a* contributing source of his harm from lead exposure, as part of a claim that multiple sources of lead exposure cumulatively proximately caused his harm." *Rogers*, Dissenting Slip Op. at 5 n.1. (Emphasis in original). In such a scenario, I believe that the appropriate burden that the plaintiff would need to meet would be to show that the causes that he identified, considered as a whole, were a more probable than not source of his harm. But, firstly, the plaintiff must actually raise such a claim, and produce evidence in support of it as to the other alleged sources of lead exposure. And, secondly, as the Court of Special Appeals pointedly noted in *Hamilton v. Dackman*, such a claim would be a "hard case" to establish, because "a plaintiff would need to produce probability-level evidence as to exposure at each property separately." 213 Md. App. 589, 616 (2013).

In contrast, when a plaintiff only identifies a single property that he claims was the source of his exposure to lead and lead poisoning, but evidence before the trial court shows that there are other reasonably likely sources of that harm, the question before the trier of fact is not whether the defendant's property was merely *a* contributor to *some* of his lead exposure along with the other cause(s) the plaintiff has identified. Rather, the issue becomes whether that property was, compared to the other reasonably likely causes, a *substantial* contributor to the plaintiff's lead exposure and consequent lead poisoning. In such a case, although the plaintiff does not need to show that a defendant's property was the *only* contributing cause of his lead exposure and injury, he must show at least that the property was "an important or significant contributor to [his] injuries." *Rogers*, No. 57, Sept. Term 2016, Dissenting Slip Op. at 7 (quoting Black's Law Dictionary (10th ed.

2014)). In my view, that requires the plaintiff to show that the defendant's property was a more probable source of his exposure and elevated blood lead levels than the other property(s).

Expert Testimony and Causation

Under either a Dow or Kirson/Rogers theory of causation, a plaintiff can overcome summary judgment and place the issue of whether the defendant's property caused the plaintiff's lead exposure and elevated blood lead levels before the trier of fact through a sufficient showing of direct or circumstantial evidence. Dow, 144 Md. App. at 75; Rogers, Majority Slip Op. at 13. The plaintiff is not required, as a matter of law, to have an expert opinion as to causation. See e.g., Ross, 430 Md. at 669 (holding that "the link between a defendant's property and a plaintiff's childhood exposure to lead paint and dust may be established through circumstantial evidence, even if expert opinion testimony is not available"). However, expert opinion may be necessary in some instances for a plaintiff to overcome summary judgment, depending on the nature and extent of the evidence. See e.g., Rogers, Majority Slip Op. at 25-26 (overturning trial court's grant of summary judgment based in part upon expert testimony as to the effect of continuing exposure to lead on the plaintiff's blood lead levels, from which "a jury could reasonably infer that if [defendant's property] was not contributing source [of lead exposure,]" plaintiff's blood lead levels would have decreased while living at that property). And, of course, a plaintiff who overcomes summary judgment still bears the burden of proof as to the element of causation at trial, where expert opinion can play a critical role in persuading a jury.

The standard for admissibility of expert testimony as to source causation is thus a vital one in lead paint actions. The Majority holds today that an expert who gives an opinion that a defendant's property caused a plaintiff's harm does not need to show or explain that other reasonably probable sources did *not* cause the plaintiff's harm. Majority Slip Op. at 15 (holding that it is "not the rule" that a source causation expert in a lead paint action "must exclude other properties before he can testify that the plaintiff was exposed to lead at the subject property") The Majority's removal of the requirement that a source causation expert must exclude other reasonably probable sources in order for his expert testimony to be admitted at trial, in combination with the Court's earlier decision in *Rogers*, is likely to lead to the widespread adoption of the new *Kirson/Rogers* theory of causation in lead paint actions, and the abandonment of the *Dow* theory. When a plaintiff has resided at more than one property that may have contained lead paint, he is unlikely to go to the time and expense of gathering evidence or obtaining an expert opinion to exclude all the properties that did not cause his harm if, instead, he can simply focus in on a particular defendant's property and show that it was a reasonably probable source of its harm. However, as I shall explain below, the Majority's holding is not only likely to usher in a major change in the conduct of lead paint negligence actions but, more importantly, is also inconsistent with the factual basis requirement in Maryland Rule 5-702 and Maryland precedent interpreting that requirement in lead paint actions.

B. Factual Basis Requirement for Expert Opinion Testimony in Lead Paint Litigation

Maryland Rule 5-702 states that "[e]xpert testimony may be admitted, in the form of an opinion or otherwise, if the court determines that the testimony will assist the trier of fact to understand the evidence or to determine a fact in issue." A trial court "bases this determination on three factors," one of which is "whether a sufficient factual basis exists to support the expert testimony." *Id*.

Maryland Rule 5-702's requirement of an adequate factual basis is necessary to ensure that an expert's testimony "constitutes more than mere speculation or conjecture." *Roy*, 445 Md. at 42 (quoting *Exxon Mobil Corp. v. Ford*, 433 Md. 426, 478, as supplemented on denial of reconsideration, 433 Md. 493 (2013)). That factual basis "may arise from a number of sources, such as facts obtained from the expert's first-hand knowledge, facts obtained from the testimony of others, and facts related to an expert through the use of hypothetical questions." *Id.* at 43 (quoting *Taylor v. Fishkind*, 207 Md. App. 121, 143 (2012), *cert. denied*, 431 Md. 221 (2013)). In order to assess the adequacy of the factual basis, a trial court looks at two factors: first, that the expert "[has] available an adequate supply of data with which to work," and second, that the expert "employ[s] a reliable methodology in analyzing that data." *Id.* at 42-43 (quoting *CSX Transp., Inc. v. Miller*, 159 Md. App. 123, 189 (2004).

Maryland appellate courts have had several occasions in recent years to apply these principles in lead paint litigation to evaluate the adequacy of the factual basis supporting an expert opinion offered by a pediatrician as to source or source causation—that a plaintiff's elevated blood lead levels and harm from lead poisoning were caused by exposure to lead while living at the subject property owned by the defendant.

Court of Special Appeals Cases

In *Taylor v. Fishkind*, the Court of Special Appeals considered whether a trial court had abused its discretion in granting summary judgment in favor of the defendant based upon a finding that the plaintiff's pediatrician expert witness, Dr. Henri Merrick, lacked an adequate factual basis as to his opinions regarding lead paint source and source causation. 207 Md. App. 121, 124 (2012), *cert. denied*, 431 Md. 221 (2013). Dr. Merrick's report concluded that the plaintiff was exposed to lead-based paint at two separate properties, based on "the age of the dwellings, the described conditions of the first dwelling, the detection of lead in an exterior window apron of this first dwelling and [the plaintiff's] blood lead levels while living at each dwelling." *Id.* at 130.

The Court of Special Appeals determined that Dr. Merrick's opinion that the property contained lead-based paint was "only supported by the age of the house and the presence of lead on one component of the exterior of the house." *Id.* at 142. The intermediate appellate court explained that he could not rely upon a presumption that the house contained lead paint simply "because it was built at a time when many houses contained lead-based paint." *Id.* Moreover, the court discounted the exterior testing because the plaintiff had provided only "scant" circumstantial evidence that the interior of the property contained lead-based paint. *Id.* at 142. Likewise, the Court of Special Appeals concluded that the only evidence on which the expert relied to conclude that the plaintiff was exposed to lead at the defendant's property was evidence that her blood lead levels

were elevated while she resided there. *Id.* at 145. The Court of Special Appeals held that "more is required to support Dr. Merrick's opinion that [the plaintiff] was exposed to lead-based paint at [the defendant's property]" because she conceded that she could not prove that elevated level was caused by the plaintiff's move to that property, as opposed to other properties where she had resided. *Id.* This Court subsequently denied the plaintiff's petition for a writ of certiorari. 431 Md. 221 (2013).

The Court of Special Appeals considered a factually similar case in *City Homes, Inc. v. Hazelwood*, in which the plaintiff's pediatrician expert, Dr. Eric Sundel, testified that the property owned by the defendant "was the source of the [plaintiff's] lead exposure" and "a substantial contributing factor to injuries [the plaintiff] sustained." 210 Md. App. 615, 687, *cert. denied*, 432 Md. 468 (2013). The intermediate appellate court held that Dr. Sundel's testimony lacked a sufficient factual basis, and the circuit court abused its discretion in permitting that testimony, because Dr. Sundel had "limited knowledge of [the plaintiff's] . . . potential exposure to lead from other sources," and had "failed to investigate other potential sources—*i.e.*, to determine whether lead had been found in other residences in which appellee had lived or visited—to gain insight into whether [the defendant's property] was a source of [the plaintiff's] lead exposure." *Id.* at 689. This Court declined to grant the plaintiff's petition for a writ of certiorari. 432 Md. 468 (2013).

Court of Appeals Cases

In *Ross v. Housing Authority of Baltimore City*, this Court first addressed whether a pediatrician's proposed expert opinion testimony that a defendant's building was the source of the plaintiff's exposure to lead and harm from lead poisoning was supported by an

adequate factual basis. 430 Md. 648 (2013). In that case, the plaintiff had resided at several homes as a child, and had elevated blood lead levels while she was living at the property owned by the defendant and at another property. Id. at 651-54. Lead testing on the defendant's property detected lead-based paint on the exterior and one interior surface. Id. at 654-55. The plaintiff's expert, Dr. Jacalyn Blackwell-White, had reviewed "various records concerning [the plaintiff] and her two residences," and, based on that review, had "opined that Ms. Ross had been exposed to lead-based paint at both residences, that such exposure 'resulted in sustained toxic blood levels' during her early developmental years." Id. at 656. However, Dr. Blackwell-White also gave an opinion that the defendant's property was "the source" of the plaintiff's elevated blood lead levels for a two year period. *Id.* at 659. She explained that "[i]f there is lead-based paint inside a house, [she would] consider it to be a contributing cause to elevated lead levels," and that "she would assume the home to be the most probable source of elevated blood lead levels 'until proven otherwise,' particularly if the house was built before 1970." Id. at 660.

This Court affirmed the circuit court's grant of a motion to exclude Dr. Blackwell-White's testimony as lacking an adequate factual basis. *Id.* at 662-63. We concluded that "Dr. Blackwell–White did not explain adequately how she reached the conclusion that the [defendant's] home was 'the source' of the lead exposure that resulted in [the plaintiff's] elevated blood lead levels." *Id.* at 663. We emphasized that "[m]erely reciting certain information that she took into account and then stating the ultimate conclusion without explaining how and by what expert method that information was weighed did not provide a basis by which the trier of fact could evaluate that opinion." *Id.*

Furthermore, we noted that because there was evidence in the record as to "various other sources of lead exposure in [the plaintiff's] environment," there were multiple potential causes of the plaintiff's exposure and elevated blood lead levels, and thus "[t]he real question for the fact-finder is how much exposure to lead at the [defendant's property] contributed to [the plaintiff's] [elevated] blood lead levels over the pertinent time period."

Id. at 664. As Dr. Blackwell-White did not offer any definitive opinion as to that question, we held that her "ultimate conclusion identifying the [defendant's property] as 'the source' was as likely to confuse as to assist a jury." *Id.* We concluded our analysis by cautioning that permitting an expert to testify under such circumstances could improperly give the expert's opinion "the imprimatur of court-endorsed expert status," leading to a "risk that a jury would give the opinion undue weight because it was stated by a court-qualified expert." *Id.*²

Prior to today's opinion, this Court most recently addressed whether there was an adequate factual basis for a pediatrician expert's opinion as to source and source causation

² After *Ross* was published, the Court of Special Appeals in *Hamilton v. Dackman*, 213 Md. App. 589, 591-92 (2013) upheld a circuit court's grant of summary judgment in a lead paint case, a ruling which the circuit court based in part upon its rejection of the testimony of Dr. Blackwell-White, as well as other experts. The Court of Special Appeals, applying *Ross*, concluded that Dr. Blackwell-White lacked a sufficient factual basis for her opinion. *Id.* at 614. The intermediate appellate court noted that, just as in *Ross*, Dr. Blackwell-White had improperly relied on an assumption that lead paint was present in the house based upon its age. *Id.* Moreover, the Court of Special Appeals determined that she had once again "reached a conclusion as to the source [of the plaintiff's lead poisoning] notwithstanding the presence of other potential sources of lead, and as such her opinion 'was as likely to confuse as to assist a jury.'" *Id.* (quoting *Ross*, 430 Md. at 664). This Court subsequently quoted the Court of Special Appeals' reasoning as to the lack of an adequate factual basis in *Hamilton v. Dackman* approvingly in our opinion in *Kirson*, 439 Md. at 538-42.

in a lead paint case in Roy v. Dackman, 445 Md. 23 (2015). In Roy, the petitioner, through his mother, filed a suit against the respondent property owners, alleging that the owners' property was "the only source of lead paint" which he had ingested as a child. Id. at 30. The petitioner had resided for the first eight months of his life at another property before moving to that owned by the respondents, where he then resided for a two year period. Id. at 31. During his period of residency at the respondents' property, tests were performed that showed elevated blood lead levels. *Id.* at 32. The respondent's property was built in 1920, and petitioner's counsel had obtained testing of the exterior of the property positive for lead-based paint. Id. at 31-32. Petitioner's mother also testified to the presence of flaking and chipping paint in both the interior and exterior of the property. *Id.* Based on those facts, the petitioner's expert pediatrician, Dr. Eric Sundel (also an expert in the Court of Special Appeals' holding in *Hazelwood*, *supra*), indicated that he would give an opinion that lead-based paint at the property caused the petitioner's injuries. Id. at 33. The respondents thereafter moved to exclude Dr. Sundel's testimony, and the circuit court granted the motion. Id. at 36-37.

This Court held that the circuit court did not abuse its discretion in excluding Dr. Sundel's testimony, concluding that there was not an adequate factual basis, and the "proposed opinion falls victim to the same problems as those discussed in *Taylor* and *Ross.*" *Id.* at 47. We determined that the proposed opinion "was based solely on scant circumstantial evidence, including the age of the home and exterior tests of the paint on the dwelling," and "did not rule out other probable sources" of lead exposure. *Id.* at 47-48.

Furthermore, we noted that there was "no discussion in the record of Dr. Sundel's methods" that he used to reach his opinion. *Id.* at 48.

Notably in *Roy*, we referenced our opinion in *Kirson*, 439 Md. at 537-38, where we had indicated in *dicta* that a plaintiff may be able to show sufficient evidence to "rule in" a property as containing lead-based paint even without excluding all other possible sources.³ Nevertheless, we held in *Roy* that, without excluding other potential sources of lead, there is not an adequate factual basis "for *an expert* to conclude that a certain property is the source of [a] child's exposure to lead when other probable sources have not been eliminated." *Roy*, 445 Md. at 47. (Emphasis added). *Roy* thus expressly recognized a distinction in the law that, in my view, is critical to this appeal. On the one hand, a plaintiff may be able to make a sufficient evidentiary showing to "rule in" a subject property as a probable sources of the plaintiff's lead exposure. But, on the other hand, an expert opinion that identifies a particular property as the source of the plaintiff's lead poisoning

³ *Roy* specifically refers to our "holding" in *Kirson* that "a lead poisoning case may succeed grounded on suitable circumstantial evidence as to source." *Id.* However, the *Kirson* Court only supplied a *dicta* hypothetical to illustrate that a plaintiff may be able to establish circumstantially that a property contained lead-based paint. *See Rogers*, No. 57, Sept. Term, Dissent Slip Op. at 6-8. Subsequently, after *Roy* was issued, this Court held in *Rogers v. Home Equity USA, Inc.* that a plaintiff can "rule in" a property as a source of lead exposure by showing that there is a "reasonable probability" that the plaintiff was exposed to lead paint at that property, and that the exposure was a "reasonably probable source" of his elevated blood lead levels. No. 57, Sept. Term 2016, Majority Slip Op. at 13, 21.

requires an adequate factual basis that includes evidence sufficient for the expert to exclude other probable sources.

The *Roy* Court appeared to rest this distinction upon Rule 5-702's statement that "[e]xpert testimony may be admitted . . . if the court determines that the testimony will assist the trier of fact to understand the evidence or to determine a fact in issue." As the Court explained, when there are multiple reasonably probable sources of the plaintiff's lead exposure, an expert opinion that does not explain why it was the defendant's property that was a substantial factor that caused the plaintiff's harm, as opposed to another property, is "as likely to confuse as to assist a jury." *Id.* at 48 (quoting *Ross*, 430 Md. at 664).

Factual Basis Standard for Causation Expert Opinions Offered In a Lead Paint Negligence Action

I distill from reviewing the above-described cases⁴ that an expert opinion in a lead paint case as to source and source causation—that a plaintiff's elevated blood lead levels were caused by exposure to lead while living at the subject property owned by the defendant—is supported by an adequate factual basis pursuant to Maryland Rule 5-702 only when three conditions are met. First, the data on which the expert relies to form his opinion must be more than "scant" circumstantial evidence. *Roy*, 445 Md. at 47; *Taylor*, 207 Md. App. at 142. *See also Hamilton v. Dackman*, 213 Md. App. at 608 (noting that

⁴ In addition to the cases described above, the Court of Special Appeals has held in *Rochkind v. Stevenson* that a trial court did not abuse its discretion by permitting a pediatrician expert to testify as to source causation in a lead paint case. 229 Md. App. 422, *cert. granted*, 450 Md. 663 (2016). *Rochkind* was thereafter accepted for certiorari to this Court and, as of the date of this dissent, has not yet been decided. As this Court has not yet determined if *Rochkind* was correctly decided, I did not rely upon it in this dissent.

"an expert cannot transform thin evidence or assumptions into viable causal connections simply by labeling them an expert opinion"). Second, when a plaintiff has resided in at least one property other than that owned by the defendant, which evidence shows was a reasonably likely source of lead-based paint, the expert must be provided with, and show to the trial court, data adequate for him to rule out the other property(s) as probable sources of the plaintiff's lead exposure and elevated blood lead levels. *Roy*, 445 Md. at 47; *Ross*, 430 Md. at 664; *Hazelwood*, 210 Md. App. at 689; *Taylor*, 207 Md. App. at 145. Third, the expert must explain the methodology he used to reach his conclusions regarding source and source causation so that the trier of fact can evaluate that methodology, as opposed to merely reciting the facts on which he relied and then state his ultimate conclusions. *Roy*, 445 Md. at 48; *Ross*, 430 Md. at 663.

C. Factual Basis in this Case

I agree with several portions of the Majority's analysis with respect to the factual basis for Dr. Klein's testimony as to source causation. Initially, I agree with the Majority that Dr. Klein did not lack an adequate factual basis for his opinion merely because he did not conduct an "independent investigation" or otherwise obtain first-hand knowledge of Mr. Christian or the properties at issue. It is true that Dr. Klein was not a treating physician, and that he had not seen or questioned Mr. Christian or his family members directly. He stated in his deposition testimony that all of his opinions in the report that he prepared for trial were based upon records that he had received from Mr. Christian's counsel's office. Additionally, Dr. Klein offered opinions in response to several hypothetical questions during that deposition. However, as the Majority notes, "we have never held that an expert

witness cannot rely on information obtained from other sources." Majority Slip Op. at 12 n.15. Indeed, we have explicitly held that an expert's factual basis "may arise from a number of sources," including "facts obtained from the testimony of others, and facts related to an expert through the use of hypothetical questions." *Roy*, 445 Md. at 43 (quoting *Taylor v. Fishkind*, 207 Md. App. 121, 143 (2012)).

Furthermore, I agree with the Majority that Dr. Klein had adequate data to support his expert opinion that, to reasonable degree of medical probability, Mr. Christian "was exposed to lead-based paint at the [Spaulding Property]." As the Majority notes, there was substantial circumstantial evidence on which Dr. Klein relied in formulating that opinion:

Dr. Klein concluded—with a reasonable degree of medical certainty—that Spaulding was a reasonably probable source of Christian's lead exposure for several reasons:

- The 2012 Arc Report found that 31 interior locations and five exterior locations tested positive for lead;
- Lead paint was banned federally in 1978, and therefore it was unlikely that Spaulding had been painted with lead-based paint **since** Christian lived there in the 1990s;
- [Department of Housing and Community Development] records described the poor condition of the property;
- A[] [Maryland Department of the Environment] certification indicated that Spaulding was not lead free;
- Christian's [free erythrocyte protoporphyrin ("FEP")] and blood lead levels were first found to be elevated while he was living at Spaulding, when he had not yet lived anywhere else;
- Family members testified that Spaulding was in a deteriorated condition while Christian was living there and that Christian touched peeling paint at the property; and

• Christian regularly stayed at Spaulding during the day while his mother was at work, both when he lived there and when he lived at Denmore.

Majority Slip Op. at 13-14.⁵ (Emphasis in original, footnote omitted). The 2012 Arc Report that determined multiple interior locations of the Spaulding Property tested positive for lead was not direct evidence that lead-based paint was present during the period of time that Mr. Christian resided at that property. But, when combined with the fact that lead paint had been banned federally prior to Mr. Christian's period of residency at the Spaulding Property, it was strong circumstantial evidence that lead paint was present on the property during the relevant time period. Moreover, the evidence of Mr. Christian's elevated lead blood tests at the Spaulding Property, the Department of Housing and Community Development records describing the poor condition of the property, as well as interrogatory testimony of several of Mr. Christian's relatives that described poor condition of the property while Mr. Christian lived there and that he regularly stayed in the home during the daytime, while circumstantial, was more than "scant" evidence that Mr. Christian was exposed to lead while living at that property. Dr. Klein thus had sufficient data from which he could conclude that defects in the Spaulding Property's interior such as chipping and flaking paint exposed Mr. Christian to lead while residing at that property.

⁵ The Majority is also correct in noting that Dr. Klein, unlike several of the experts in the cases discussed above, did not make the mistake of concluding solely or primarily from the age of the property that it must have contained lead paint, to which the plaintiff was exposed. *See e.g. Taylor*, 207 Md. App. at 142. Although Dr. Klein considered the age of the Spaulding Property, it was just one of several factors upon which he relied to formulate his opinion that Mr. Christian was exposed to lead at that property.

However, Dr. Klein did not explain the methodology he used to assess that data and reach his conclusion that Mr. Christian was exposed to lead at the Spaulding Property. Instead, in both his report and his deposition testimony, he merely cited the "information that [he] took into account and then stat[ed] [his] ultimate conclusion without explaining how and by what expert method that information was weighed." *Ross*, 430 Md. at 663. As this Court held in *Ross*, that kind of recitation by an expert of the information relied upon, without any explanation, "did not provide a basis by which the trier of fact could evaluate th[e] opinion." *Id.* As Dr. Klein did not detail his methodology in support of his opinion that Mr. Christian was exposed to lead at the Spaulding Property, I cannot agree that he had a sufficient factual basis for that opinion.

Much more troubling, however, is that the Majority has overlooked the absence of any factual basis or methodology in support of Dr. Klein's additional opinion that it was Mr. Christian's exposure to lead-based paint at the Spaulding Property that was the substantial factor cause of his elevated blood lead levels and injuries from lead poisoning, as opposed to his period of residency at the Denmore Property, which Dr. Klein agreed was also a source of his exposure to lead. The Majority states that Dr. Klein did "not ignore[]" and "considered" information in the record as to the Denmore Property, referencing his report in which he stated that he considered "[p]roperty information for 3605 Spaulding Avenue [and] 4946 Denmore Avenue." Majority Slip Op. at 12 n.15, 14. However, it was not sufficient for Dr. Klein to have merely looked at or briefly "considered" information as to the Denmore Property. Rather, under this Court's precedent in *Ross* and *Roy*, he needed to put forth an adequate supply of data to show that it was exposure to lead at the Spaulding Property, and not the Denmore Property, that was the probable substantial cause of his harm from lead poisoning. *See Roy*, 445 Md. at 47; *Ross*, 430 Md. at 663-64. And, he needed to explain what methodology he used to rule out the Denmore Property as a probable source of exposure. *Id*.

Based on the evidence in the record, Dr. Klein both failed to offer an adequate supply of data and failed to describe his methodology in support of his opinion that the Spaulding Property was the substantial factor cause of Mr. Christian's elevated blood lead levels and harm from lead poisoning. Some of the data on which Dr. Klein relied indicated a *possibility* that the Spaulding Property was a substantial factor cause of his elevated blood lead levels. Specifically, Mr. Christian had an elevated blood lead level of 9 $[\mu]g/dL$ on February 20, 1992, when he was just over two years old, and, according to the testimony of his relatives, at that time, he had not "yet lived anywhere else." See Majority Slip Op. at 2, 14. However, there was also evidence that after Mr. Christian subsequently moved to reside at the Denmore Property in October 1992, his blood lead levels significantly increased while he resided at that property, first to $10 \mu g/dL$ in February 18, 1993 and then to 17 µg/dL on July 16, 1993. Id. at 2. The record thus indicates that Mr. Christian's blood lead levels rose both while he was residing at the Spaulding Property, and while he resided at the Denmore Property. But, Dr. Klein never identified the data on which he relied to conclude that it was the initial exposure at the Spaulding Property, and not what appears to be a subsequent exposure at the Denmore Property, that was the substantial cause of his harm from lead poisoning. Nor did he describe any methodology that he had used to reach that conclusion.

Relying on the Court's suggestion in *Kirson*, 439 Md. at 537-38, 544, that a plaintiff may be able to show that a property was a source of lead exposure without excluding other reasonably probable sources of such exposure, the Majority holds that it "is not the rule" in Maryland that an expert as to source causation in a lead paint case must "exclude other [reasonably probable] properties before he can testify that the plaintiff was exposed to lead at the subject property." Majority Slip Op. at 15. The Majority is incorrect. As noted above, when this Court last considered expert testimony as to lead paint source causation in *Roy*, the Court recognized that *Kirson* had suggested "that a lead poisoning case may succeed grounded on suitable circumstantial evidence as to source," without needing to exclude other properties. *Roy*, 445 Md. at 47. Nonetheless, the Court **expressly held** in *Roy* that expert testimony must be held to a higher standard, holding that "it is not enough for an expert to conclude that a certain property is the source of [a] child's exposure to lead when other probable sources have not been eliminated." *Id*.

The Majority today is, therefore, overturning an express holding of this Court, less than two years from the date that holding was issued, in direct contravention of the principle of *stare decisis*. *See e.g.*, *DRD Pool Serv.*, *Inc. v. Freed*, 416 Md. 46, 63 (2010) (describing *stare decisis* as meaning "to stand by the thing decided," and that it is "the preferred course because it promotes the evenhanded, predictable, and consistent development of legal principles, fosters reliance on judicial decisions, and contributes to the actual and perceived integrity of the judicial process"). The holding in *Roy* from which the Majority departs today was not an outlier but rather, as I described above, entirely in accord with this Court's precedent in *Ross*, as well as the Court of Special Appeals' holdings in *Taylor* and

Hazelwood. Moreover, in *Roy* and *Ross* this Court provided a cogent reason for requiring a lead source expert to exclude other probable sources—explaining that permitting an expert to opine that the defendant's property was the substantial cause of the plaintiff's lead poisoning, without explaining why other properties that evidence in the record showed were reasonably probable causes of exposure were not, is "as likely to confuse as to assist a jury." *Roy*, 445 Md. at 48 (quoting *Ross*, 430 Md. at 664). However, the Majority has offered no such rationale for its holding today that sweeps away that requirement.

D. Conclusion

In summary, I would hold that when an expert witness is offered to show that a plaintiff was exposed to lead at a particular property, and that the exposure at that property caused the plaintiff's elevated blood levels and injury from lead poisoning, that expert meets the requirement in Maryland Rule 5-702 to show adequate factual basis only when he relies on more than "scant" circumstantial evidence, rules out other reasonably probable sources of the plaintiff's lead exposure and elevated blood lead levels, and explains the methodology he used to reach his conclusions. As to Dr. Klein's first opinion that Mr. Christian was exposed to lead-based paint at the Spaulding Property, while I agree there was adequate data in the record to support that opinion, Dr. Klein failed to explain the methodology he used to reach the opinion so that a trier-of-fact could properly assess it. And, as to his second opinion that Mr. Christian's exposure at the Spaulding Property was a substantial factor cause of his harm, Dr. Klein did not identify any data or methodology to show that the Spaulding Property was a more probable source of the harm than the Denmore Property.

The Majority's holding that Dr. Klein was not required to exclude other probable sources of Mr. Christian's lead poisoning is contrary to this Court's prior holdings in *Ross* and *Roy*. Furthermore, the Majority's holding will encourage trial courts to place the "imprimatur of court-endorsed expert status" on expert opinions that do not clearly establish that the defendant's property was, more likely than not, a substantial factor cause of the plaintiff's harm, and thereby lead to confusion among jurors who are called to decide that very issue. *See Ross*, 430 Md. at 664.

For the above stated reasons, I would affirm the trial court's grant of the motion to exclude Dr. Klein's testimony regarding lead-source causation and, therefore, I respectfully dissent.