No. 14-297

IN THE

Supreme Court of the United States

SQM NORTH AMERICA CORPORATION,

Petitioner,

v.

CITY OF POMONA,

Respondent.

On Petition for Writ of Certiorari to the United States Court of Appeals for the Ninth Circuit

AMICUS BRIEF FOR THE AMERICAN COATINGS ASSOCIATION, THE CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA, THE FERTILIZER INSTITUTE, THE NATIONAL ASSOCIATION OF MANUFACTURERS, AND THE PHARMACEUTICAL RESEARCH AND MANUFACTURERS OF AMERICA IN SUPPORT OF PETITIONER

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October 14, 2014

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INTRODUCTION AND INTEREST OF AMICI

Amici curiae the American Coatings Association, the Chamber of Commerce of the United States of America, the Fertilizer Institute, the National Association of Manufacturers, and the Pharmaceutical Research and Manufacturers of America respectfully submit this brief in support of the Petitioner, on behalf of themselves and their membership.[1]

The American Coatings Association is a voluntary, nonprofit trade association representing some 300 manufacturers of paints, coatings, adhesives, sealants and caulks, raw materials suppliers to the industry, and product distributors.

The Chamber of Commerce of the United States of America is the world's largest business federation. The Chamber represents 300,000 direct members and indirectly represents the interests of more than three million companies and professional organizations of every size, in every industry, and from every region of the country.

The Fertilizer Institute is the leading voice in the fertilizer industry, representing the public policy,

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[1] The parties have provided blanket consent to the filing of amicus briefs and received 10 days' notice of *amici curiae*'s intention to file, pursuant to Supreme Court Rule 37.2(a). No counsel for a party authored this brief in whole or in part, and no person other than the *amici curiae*, their members, or their counsel made any monetary contribution intended to fund the preparation or submission of this brief.

communication and statistical needs of its members, including producers, manufacturers, retailers and transporters of fertilizer.

The National Association of Manufacturers is the nation's largest industrial trade association, representing small and large manufacturers in every industrial sector and in all 50 states.

The Pharmaceutical Research and Manufacturers of America is a voluntary nonprofit association representing the nation's leading research-based pharmaceutical and biotechnology companies.

The decision below is illustrative of a broader, troubling trend of courts abdicating their gatekeeping duties under Rule 702 of the Federal Rules of Evidence and this Court's precedents. Too often, courts are admitting unreliable expert testimony, reasoning that a jury can muddle through it with the aid of competing expert evidence and cross-examinations. Members of *amici* are frequently the targets of litigation premised on such testimony, and the courts' failure to adhere to their gatekeeping obligations and exclude unreliable "expert" evidence has resulted in significant verdicts and coercive settlements.

Accordingly, *amici curiae* urge the Court to grant the Petition to resolve a circuit split—acknowledged by the Ninth Circuit—whereby some courts have improperly circumscribed a trial court's gatekeeping function to a singular review of the reliability of an expert's methodology under Rule 702(c), without regard to whether the expert reliably applied this methodology (Rule 702(d)) based upon sufficient facts or data (Rule 702(b)). This case cleanly presents an issue of great importance to *amici*'s members and warrants a grant on the question presented.

ARGUMENT

The decision below provides a stark example of the Ninth Circuit's fundamental misunderstanding of—or resistance to—*Daubert* and its progeny. As Petitioner explains in the Petition, the panel below eschewed its obligation to determine whether *any* step in the expert's approach rendered the expert's testimony unreliable. In so doing, the panel improperly reversed the district court for "kicking the factual tires" of the expert's opinion, incorrectly admonishing the lower court to delegate its *Daubert* role to the jury. Specifically, the court held that the district court abused its discretion in assessing the sufficiency of Respondent's expert's database of potential sources of perchlorate, upon which the expert based his opinion of the actual source of perchlorate in Pomona's water system. *See* Pet. App. 18a-20a. The Ninth Circuit ruled that the limitations in the database raised "[a] factual dispute" that "is best settled by a battle of the experts before the fact finder, not by judicial fiat." Pet. App. 19a.

The Ninth Circuit's erroneous approach to expert testimony contravenes this Court's unambiguous rulings, illustrates a sharp division among federal circuit courts, and presents an issue of exceptional importance regarding the trial court's responsibility to screen factually unfounded expert testimony that extends well beyond the present case. The Court should grant the Petition and send a strong message to the courts below that their responsibilities under *Daubert* and its progeny may not be ignored.

I. THE DECISION BELOW RESTS UPON AN IMPROPERLY NARROW UNDERSTANDING OF RULE 702 IN CONFLICT WITH THE DECISIONS OF THIS COURT AND OTHER CIRCUITS.

Despite this Court's explanation in *Weisgram v. Marley Co.*, 528 U.S. 440, 455 (2000) that *Daubert* and its progeny have imposed "exacting standards of reliability" for expert testimony, in the past fourteen years, a number of lower courts have drifted far afield of the Court's holdings. Like the Ninth Circuit here—which relied on what it incorrectly characterized as "*Daubert's* liberal standard," Pet. App. 19a—these courts have abdicated their gatekeeping responsibility through improper reliance on "vigorous cross-examination" as a cure for factually unfounded expert testimony. The patchwork of approaches by the federal circuit courts has exposed *amici*'s members to inconsistent judgments, and significant litigation uncertainty. The time has come for the Court to steer the lower courts back on their proper *Daubert* course.

A. The Ninth Circuit's Erroneous Methodology-Only Approach Conflicts With The Approach Taken In Other Circuits.

The Ninth Circuit's holding below was premised upon what it acknowledged is a split among the circuits regarding the scope of a district court's gatekeeping responsibility under *Daubert*. Pet. 16a-17a. The Ninth Circuit rejected the Third Circuit's conclusion that "any step that renders the analysis unreliable . . . renders the expert's testimony inadmissible. This is true whether the step completely changes a reliable methodology or merely misapplies that methodology." *In re Paoli R.R. Yard PCB Litig.*,

35 F.3d 717, 745 (3d Cir. 1994). The court explained that in the Ninth Circuit, a district court instead must confine its analysis solely to the reliability of the methodology itself and must leave to the jury whether the expert applied the methodology in a reliable manner. Pet. 17a. As Petitioner correctly explains, by so holding, the Ninth Circuit abdicated its responsibility under Rule 702(b) and (d) to analyze two key steps in plaintiff's expert's causation opinion: his use of a deficient database of perchlorate samples to identify potential sources of groundwater contamination and his departure from accepted protocol in failing to validate his groundwater analysis through split sampling. Pet. 19-23.

The Ninth Circuit rule also stands contrary to rulings by the Second, Fifth, Tenth, and Eleventh Circuits, each of which have endorsed the Third Circuit's "any step" requirement rejected in the holding below. *See Amorgianos v. Nat'l R.R. Passenger Corp.*, 303 F.3d 256, 267 (2d Cir. 2002) (quoting *In re Paoli*); *Paz v. Brush Engineered Materials, Inc.*, 555 F.3d 383 (5th Cir. 1999) (same); *Dodge v. Cotter Corp.*, 328 F.3d 1212, 1222 (10th Cir. 2003) (same); *McClain v. Metabolife Int'l, Inc.*, 401 F.3d 1233, 1245 (11th Cir. 2005) (same). More fundamentally, the Ninth Circuit rule ignores the interdependence between an expert's methodology and his application of that methodology through proper selection of underlying data and faithful adherence to established protocols. The most reliable methodology can lead to nonsensical results if fed incorrect data or if modified by the expert or applied in an erroneous fashion. Indeed, it is the ability of experts to misuse seemingly reliable methods to reach a preordained result—and the danger of unfair prejudice, confusion of the issues, or misleading the jury from such scientifically-cloaked

evidence—that caused the Court to charge district courts with a gatekeeping responsibility.

B. The Ninth Circuit's Approach Conflicts With This Court's Decisions And Those of Other Circuits Requiring the Exclusion of Factually Unfounded Expert Testimony.

Petitioner cogently explains how the Ninth Circuit's methodology-only rule led that court to disregard key flaws at multiple steps in the plaintiff's expert's opinion. *Amici* write separately below to highlight the broader consequences of the Ninth Circuit's abdication of its responsibility to scrutinize one of these steps: the expert's reliance on insufficient facts and data to support his opinion.

1. In *Daubert* and Subsequent Cases, This Court Clarified That Trial Courts Must Closely Scrutinize the Factual Foundations of Expert Testimony.

In *Daubert*, the Court explained that the federal rules require close scrutiny of the factual foundation of expert testimony because "[u]nlike an ordinary witness . . . an expert is permitted wide latitude to offer opinions, including those that are not based on firsthand knowledge or observation." 509 U.S. at 592. The Court noted that "this relaxation of the usual requirement of firsthand knowledge . . . is premised on an *assumption* that the expert's opinion will have a *reliable basis* in the knowledge and experience of his discipline." *Id.* (emphasis added, internal citation omitted). In light of this assumption, "the judge in weighing possible prejudice against probative force under Rule 403 of the present rules exercises more

control over experts than over lay witnesses." *Id.* at 595.

Federal Rules 702 and 703 set forth the evidentiary strictures on the assumption of a reliable basis for expert testimony. Rule 702(b) provides that an expert may only offer opinion testimony if "the testimony is based on sufficient facts or data." Rule 703, in turn, identifies the kinds of facts or data that will be deemed sufficient, explaining that expert opinion should be admitted only "[i]f experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the subject." *See also Daubert*, 509 U.S. at 595 (expert testimony must be based on facts or data "of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject").

"[T]he rules of evidence," the Court explained, "assign to the trial judge the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand." 509 U.S. at 597. Trial judges have been instructed that "[p]roposed [expert] testimony must be supported by appropriate validation—*i.e.*, 'good grounds' based on what is known," and that "the word 'knowledge' connotes more than subjective belief or unsupported speculation." *Id.* at 590. Only expert testimony based upon such "good grounds" may be submitted to the jury to be weighed along with other admissible evidence.

Unfortunately, some lower courts resisted *Daubert* based on a misreading of two statements in the Court's opinion. First, the Court stated that "[t]he focus" of the admissibility determination "must be solely on principles and methodology, not the conclusions that they generate." *Id.* at 595. Properly understood, an expert's "principles and methodology" include the

identification and selection of a proper factual basis for an expert conclusion. However, some lower courts misconstrued this statement as creating an artificial divide between an expert's factual foundation and methodology, with only the latter subject to judicial scrutiny. Second, some courts seized upon the Court's statement that "[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence." *Id*. at 596. This statement does not authorize lower courts to abdicate their gatekeeping responsibility to determine in the first instance whether expert testimony is "admissible evidence." *See also id.* at 592-593 (explaining that district court "must determine at the outset" whether expert testimony is admissible based on a "preliminary assessment" under Rule 702). But, again, this language was cited by lower courts as a means to avoid their *Daubert* obligation.

The Court granted *certiorari* in two subsequent cases to address this lower court confusion. In *General Electric Co. v. Joiner*, 522 U.S. 136, 144 (1997), the Court rejected the narrow reading of *Daubert*'s focus on expert methodology. The Court explained that "conclusions and methodology are not entirely distinct from one another," 522 U.S. at 146, and that "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." *Id*. The Court reversed the Eleventh Circuit's rejection of a trial court's exclusion of expert testimony, holding that it was within the trial court's discretion to conclude "that the studies upon which the experts relied were not sufficient, whether individually or in combination, to support their conclusions." *Id*. at 146-47. The Court rejected the argument that

the trial court should have confined its gatekeeping inquiry to the *methodological* question "whether animal studies can ever be a proper foundation for an expert's opinion." The Court explained that a trial court also must consider how this general methodology was *applied* to reach the opinions at issue: "Of course, whether animal studies can ever be a proper foundation for an expert's opinion was not the issue. The issue is whether *these* experts' opinions were sufficiently supported by the animal studies on which they purport to rely." *Id.*

In *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999), the Court reemphasized the need for judicial scrutiny of the factual foundation of expert testimony, explaining that "where [an expert's] testimony's *factual basis*, *data*, principles, methods, or their application are called sufficiently into question, . . . the trial judge *must determine whether the testimony has* '*a reliable basis* in the knowledge and experience of [the relevant] discipline.'" *Id.* at 149 (emphasis added) (quoting *Daubert*, 509 U.S. at 592). Once again, the Court reversed a circuit court opinion that had rejected a trial court's exclusion of factually unfounded expert testimony. In reinstating the trial court's holding, the Court upheld that court's findings of faulty factual predicates to the expert's opinions. *See id.* at 154 (expert opinion as to alleged tire defect predicated on the fact that the tire was not abused "despite some evidence of the presence of the very signs [of abuse] for which he looked (and two punctures)"); *id.* at 155 (pointing to expert's statement that the remaining tread depth on the tire "was 3/32 inch, though the opposing expert's (apparently undisputed) measurements indicate that the tread depth taken at various positions around the tire

actually ranged from .5/32 of an inch to 4/32 of an inch") (citation omitted).

2. Nonetheless, Circuit Courts Are Divided In Their Treatment of The Factual Foundations of Expert Testimony.

Cases from the Second, Third, and Sixth Circuits properly have accepted this Court's rulings in *Daubert* and its progeny that require trial courts to analyze the facts underlying expert testimony. As these circuits have explained, the "suggestion that the reasonableness of an expert's reliance on facts or data to form his opinion is somehow an inappropriate inquiry under Rule 702 results from an unduly myopic interpretation of Rule 702 and ignores the mandate of *Daubert* that the district court must act as a gatekeeper." *ZF Meritor, LLC v. Eaton Corp.*, 696 F.3d 254, 294 (3d Cir. 2012), *cert. denied*, 133 S. Ct. 2025 (2013). These cases properly recognize that, "[i]n deciding whether a step in an expert's analysis is unreliable, the district court should undertake a rigorous examination of the facts on which the expert relies, the method by which the expert draws an opinion from those facts, and how the expert applies the facts and methods to the case at hand." *Amorgianos*, 303 F.3d at 267. Trial courts "may, indeed must, look beyond the conclusions of the experts to determine whether the expert testimony rests on a reliable foundation." *Kalamazoo River Study Group v. Rockwell Int'l Corp.*, 171 F.3d 1065, 1072 (6th Cir. 1999) (alterations omitted).

For these courts, "when an expert opinion is based on data, a methodology, or studies that are simply inadequate to support the conclusions reached, *Daubert* and Rule 702 mandate the exclusion of that unreliable opinion testimony." *Ruggiero v. Warner-*

Lambert Co., 424 F.3d 249, 255 (2d Cir. 2005). Thus, litigants are assured that "expert testimony based on assumptions lacking factual foundation in the record [will be] properly excluded." *Meadows v. Anchor Longwall & Rebuild, Inc.*, 306 F. App'x 781, 790 (3d Cir. 2009); *see also Elcock v. Kmart*, 233 F.3d 734, 754 (3d Cir. 2000) ("expert's testimony . . . must be accompanied by a sufficient factual foundation before it can be submitted to the jury").

Decisions from other circuit courts stand on the opposite side of this divide. These courts, such as the First Circuit, maintain that "[t]he soundness of the factual underpinnings of the expert's analysis and the correctness of the expert's conclusions based on that analysis are factual matters to be determined by the trier of fact." *Milward v. Acuity Specialty Prods. Grp., Inc.*, 639 F.3d 11, 22 (1st Cir. 2011), *cert denied*, 132 S. Ct. 1002 (2011). District courts are instructed that "[t]he reliability of data and assumptions used in applying a methodology is tested by the adversarial process and determined by the jury; the court's role is generally limited to assessing the reliability of the methodology—the framework—of the expert's analysis." *Manpower, Inc. v. Ins. Co. of Pennsylvania*, 732 F.3d 796, 808 (7th Cir. 2013).

Fatally misconstruing *Daubert*, these courts have concluded that "the factual basis of expert testimony goes to the credibility of the testimony, not the admissibility, and it is up to the opposing party to examine the factual basis for the opinion in cross-examination." *Bonner v. ISP Techs., Inc.*, 259 F.3d 924, 929 (8th Cir. 2001). These courts hold that "[t]he district court usurps the role of the jury, and therefore *abuses its discretion*, if it unduly scrutinizes the quality of the expert's data and conclusions rather

than the reliability of the methodology the expert employed." *Manpower, Inc.*, 732 F.3d at 806 (emphasis added). Accordingly, litigants in these circuits are deprived of judicial protection from factually unfounded expert testimony.

II. THE DISCREPANT TREATMENT OF THE FACTUAL FOUNDATIONS OF EXPERT TESTIMONY IS SUBJECTING LITIGANTS TO UNEQUAL JUSTICE IN ALL MANNER OF CIVIL LITIGATION.

The disarray in the circuit courts over the proper treatment of the factual foundations of expert testimony is of extraordinary importance to litigants in a wide variety of legal disputes, and it is subjecting broad categories of litigants to different admissibility rules based upon the happenstance of the court in which their case is litigated.

A. *Daubert* Scrutiny of the Factual Foundations of Fate and Transport Expert Opinions in Environmental Litigation.

As in the case below, environmental litigation often turns on questions regarding the source, scope and magnitude of alleged air, soil, or groundwater contamination. To answer these questions, litigants turn to experts, who rely on complicated models to provide estimates regarding the source, fate and transport of contaminants. While the models used by these experts may be generally accepted, the results can vary widely depending on how the models are used and what data is selected as inputs. Unfortunately, *Daubert* scrutiny of these experts can vary just as widely, depending on which circuit reviews their testimony.

In *Renaud v. Martin Marietta Corp.*, 972 F.2d 304 (10th Cir. 1992), plaintiffs submitted the testimony of an expert witness who proffered a fate and transport model that purported to track eleven years of discharges from the defendant's plant to the plaintiffs' water supplies. However, as the court noted, this "11-year postulation by plaintiffs was extrapolated back by their experts from a single water sample." *Id.* at 307. The Tenth Circuit held that the district court "had an independent duty here to decide whether the single data point supported the admissibility of the conclusions plaintiffs' experts sought to draw therefrom" and affirmed the district court holding "excluding as unsound the plaintiffs' experts' conclusions as to causation based on the single data point the record contained." *Id.* at 308.

Likewise, in *Kalamazoo River Study Group*, the Sixth Circuit affirmed the exclusion of expert testimony that a release of PCBs caused contamination of a nearby river. 171 F.3d at 1070-73. The district court held that the expert's testimony was based upon incorrect facts regarding waterflow from the defendants' property and a 1700-foot gap in the opined pathway of the contaminants. *Id.* at 1073. On appeal, plaintiffs argued that the district court had "overstepped its discretionary bounds . . . by resolving credibility judgments in favor of [defendant's] experts." *Id.* at 1072. The Sixth Circuit disagreed, finding that the district court had properly "focused on the factual underpinnings of [plaintiff's expert's] conclusions." *Id.*

A similar fact pattern, however, resulted in a different outcome in *United States v. Dico, Inc.*, 266 F.3d 864 (8th Cir. 2001). As in *Kalamazoo River*, the plaintiff's expert in *Dico* opined that contamination on the defendant's property had spread along a

"continuous line" to reach groundwater. *Id.* at 871. As in *Kalamazoo River*, the defendant sought to exclude this testimony because there was no reliable factual basis for the opined continuous line of contaminants. *Id.* The Eighth Circuit, however, rejected this argument, holding that "the sufficiency of factual basis of expert testimony goes to credibility, not admissibility." *Id.* (citing *Hose v. Chicago N.W. Transp. Co.,* 70 F.3d 968, 974 (8th Cir. 1995)).

B. *Daubert* Scrutiny of the Factual Foundations of General Causation Expert Opinions.

Daubert and *Joiner* each addressed expert opinions regarding general causation, *i.e.*, whether an exposure is generally capable of causing injury, and general causation expert testimony has remained one of the most active areas of *Daubert* jurisprudence.

Joiner directs lower courts to examine the data underlying general causation opinions. In *Joiner*, the Court rejected plaintiffs' argument—mirrored in the Ninth Circuit opinion here—that "only a faulty methodology or theory . . . is a valid basis to exclude expert testimony." *Contrast* Pet. App. 17a *with Joiner*, 522 U.S. at 146. The Court affirmed the trial court's determination that plaintiff's expert could not reasonably rely on data from high-dose animal studies or non-statistically significant human studies involving different exposures or disease endpoints. 522 U.S. at 144-46. As the Court explained, "[t]he studies were so dissimilar to the facts presented in this litigation that it was not an abuse of discretion for the District Court to have rejected the experts' reliance on them." *Id.* at 144-45.

Following *Joiner*, many circuits have properly examined the factual predicates of general causation opinions. For example, in *Rider v. Sandoz Pharmaceuticals Corp.*, 295 F.3d 1194 (11th Cir. 2002), the court excluded general causation testimony that improperly relied on animal studies, case reports, chemical analogies and regulatory findings. Likewise, in *Tamraz v. Lincoln Elec. Co.*, 620 F.3d 665, 670 (6th Cir. 2010), *cert denied*, 131 S. Ct. 2454 (2011), the court held that studies associating manganese exposure to manganism did not provide sufficient facts or data to support an expert's opinion that manganese exposure could cause Parkinson's Disease. *See also Mitchell v. Gencorp Inc.*, 165 F.3d 778, 782 (10th Cir. 1999) ("Without scientific data supporting their conclusion that chemicals similar to benzene cause the same problems as benzene, the analytical gap in the experts' testimony is simply too wide for the opinions to establish causation.").

In *Milward*, however, the First Circuit rejected this authority, holding that the district court had "overstepped the authorized bounds of its role as gatekeeper" when it analyzed the factual foundations of an expert's opinion that benzene exposure can cause Acute Promyelocitic Leukemia. 639 F.3d at 22. Although the First Circuit did not dispute the district court's conclusion that none of the lines of evidence underlying the expert's opinion supported a reliable inference of causation, *id.* at 23, it held that the district court was required to defer to the expert's claimed inchoate balancing of the "weight of the evidence." *Id.* The First Circuit conceded that "no scientific methodology exists" for this approach, which—along with the command that the trial court not consider the reliability of the evidence being

weighed—deprives *Daubert* of any meaning. *Id.* at 18-19.

C. *Daubert* Scrutiny of the Factual Foundations of Specific Causation Expert Opinions.

Judicial scrutiny of the factual underpinnings of causation testimony is equally important when experts opine on specific causation, that is, whether an exposure in fact caused a particular plaintiff's injury. For example, in *Wills v. Amerada Hess Corp.*. 379 F. 3d 32, 49 (2d Cir. 2004) (Sotomayor, J.), the Second Circuit rejected plaintiff's expert's reliance on the testimony of plaintiff's co-worker to support his opinion that the plaintiff had been exposed to a harmful level of toxins. Notwithstanding the expert's testimony to the contrary, the court held under *Daubert* that the co-worker's testimony "provide[d] an insufficient basis for an expert to extrapolate the amount of toxins to which decedent was exposed." *Id.*

Likewise, courts have rejected specific causation testimony based upon an expert's use of differential diagnosis to rule out alternative causes of injury where the expert lacks a sufficient factual understanding of the plaintiff's condition. Courts have held that "performance of physical examinations, taking of medical histories, and employment of reliable laboratory tests all provide significant evidence of a reliable differential diagnosis, and that their absence makes it much less likely that a differential diagnosis is reliable." *Best v. Lowe's Home Ctrs., Inc.*, 563 F.3d 171, 179 (6th Cir. 2009) (internal quotation marks omitted); *see also Cooper v. Smith & Nephew, Inc.*, 259 F.3d 194, 203 (4th Cir. 2001) (excluding specific causation opinion of plaintiff's expert who "failed to conduct a physical examination of [the plaintiff] and

did not speak with any of [the plaintiff's] treating physicians"); *Conde v. Velsicol Chem. Corp.*, 24 F.3d 809, 813 (6th Cir. 1994) (excluding specific causation testimony where "numerous tissue, bone, and blood samples taken from the [plaintiffs] revealed no evidence of detectible amounts of chlordane accumulated in their bodies") (internal quotation marks omitted).

This proper *Daubert* scrutiny is thwarted, however, in circuits that preclude judicial review of the factual bases of an expert's opinion. In *Walker v. Soo Line Railroad Co.*, 208 F.3d 581 (7th Cir. 2000), a plaintiff presented a psychologist's testimony that a workplace accident had impaired the plaintiff's mental abilities. The psychologist's opinion turned on his understanding of the plaintiff's educational history, which in turn was based on information supplied by the plaintiff's girlfriend. *Id.* at 586. The district court determined that this educational history was inaccurate and excluded the expert's testimony. *Id.* The Seventh Circuit reversed, holding that "[i]n situations in which a medical expert has relied upon a patient's self-reported history and that history is found to be inaccurate, district courts usually should allow those inaccuracies in that history to be explored through cross-examination." *Id*

D. *Daubert* Scrutiny of the Factual Foundations of Dose Reconstruction Expert Opinions.

Judicial review of the factual basis of expert testimony is also essential in the emerging field of dose reconstruction testimony. Courts throughout the country properly have concluded that "[s]cientific knowledge of the harmful level of exposure to a chemical plus knowledge that the plaintiff was

exposed to such quantities are minimal facts necessary to sustain the plaintiff's burden in a toxic tort case." *See*, *e.g.*, *Mitchell*, 165 F.3d at 781. In response, plaintiffs in toxic tort cases increasingly rely on experts in the "relatively new field of exposure science," who seek to proffer opinions on the dose and duration of historical exposures. *See* Paul J. Lioy, *Exposure Science: A View of the Past and Milestones for the Future*, 118(8) Environmental Health Perspectives 1081, 1081 (Aug. 2010).

The opinions of these "dose reconstruction" experts relies heavily on the factual assumptions underlying the expert's exposure calculations. In *Moore v. International Paint, L.L.C.*, 547 Fed. Appx. 513 (5th Cir. 2013), the Fifth Circuit properly excluded the testimony of a dose reconstruction expert who based his opinions on alleged facts regarding the plaintiffs' work history that either had no reliable support or were flatly contradicted by the available evidence. *See also Amorgianos*, 303 F.3d at 268 (excluding historical exposure opinions of industrial hygienist who "inexplicably" did not consider data in his calculations that he conceded a "proper exposure assessment" would take into consideration).

A very different result occurred in *Schultz v. Akzo Nobel Paints, LLC*, 721 F.3d 426 (7th Cir. 2013), where the Seventh Circuit's rule shielding experts from *Daubert* scrutiny of the factual bases of their opinions led to the admission of similarly unfounded testimony. *Schultz* was decided in a unique procedural posture, because the district court had dismissed plaintiff's claim based on the exclusion of plaintiff's medical causation expert and had not addressed a separate *Daubert* challenge to plaintiff's dose reconstruction

expert. In reversing the district court's ruling, however, the Seventh Circuit relied on the dose reconstruction expert's testimony as providing the necessary foundation for the causation expert's opinion. *See* 721 F.3d at 428-29. On remand, the defendant reasserted its *Daubert* challenge to the dose reconstruction expert's testimony, arguing that the expert's testimony was based on inaccurate factual assumptions regarding "work place protection (*i.e.*, respirators), plant size and volume, duration of exposure, numbers of hours painting each day, air exchange rate, and air speed and inter zonal air flow." *Shultz v. Glidden Co.*, No. 08-C-919, 2013 WL 4959007, at *3 (E.D. Wis. Sept. 13, 2013). Following Seventh Circuit precedent, the district court gave short shrift to this argument, explaining that "the accuracy of the actual evidence [underlying the expert's opinion] is to be tested before the jury." *Id.*

CONCLUSION

As Justice Breyer cautioned in *Joiner*, "it may . . . prove particularly important to see that judges fulfill their *Daubert* gatekeeping function, so that they help assure that the powerful engine of tort liability . . . points to the right substances and does not destroy the wrong ones." *Joiner*, 522 U.S. at 148-49 (Breyer, J., concurring). The Ninth Circuit opinion below, and the disarray in other circuits that have followed the same path, make clear that it is "particularly important" that this Court grant the Petition "to see that judges" continue to "fulfill their *Daubert* gatekeeping function" in all the federal courts. For the foregoing reasons, the American Coatings Association, the Chamber of Commerce of the United States of America, the Fertilizer Institute, the National Association of Manufacturers, and the Pharmaceutical Research and Manufacturers of America, *amici curiae* herein, urge the Court to grant the petition for writ of certiorari.

Respectfully submitted,

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