

**In the Supreme Court  
State of Georgia**

<b>SCAPA DRYER FABRICS, INC.</b>	)	
	)	
<i>Petitioner,</i>	)	
	)	
v.	)	<b>Case No. S15C1278</b>
	)	
<b>ROY KNIGHT AND MILVA KNIGHT</b>	)	
	)	
<i>Respondents.</i>	)	

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**BRIEF OF *AMICI CURIAE* COALITION FOR LITIGATION JUSTICE, INC.,  
CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA,  
NATIONAL ASSOCIATION OF MANUFACTURERS,  
AMERICAN TORT REFORM ASSOCIATION,  
AND NFIB SMALL BUSINESS LEGAL CENTER**

**IN SUPPORT OF PETITIONER**

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## **INTEREST OF AMICI**

*Amici* are organizations whose members include asbestos defendants and their insurers.<sup>1</sup> *Amici* have a substantial interest in ensuring that expert evidence in asbestos cases is consistent with sound science and public policy. *Amici* regularly file briefs before state and federal appellate courts to explain the science behind today's low-dose asbestos lawsuits and to encourage the courts to ensure asbestos litigation applies mainstream medical knowledge and the ordinary requirements of toxic tort legal causation standards. The decision below violates these basic principles, and, if allowed to stand, would contribute to the unwarranted extension of asbestos litigation that is impacting *Amici*'s members.

## **INTRODUCTION**

*Amici* support the petition for reversal filed by Scapa Dryer Fabrics, Inc. ("Scapa"). Prior to *Scapa*, Georgia law required a plaintiff expert to determine a causative dose in low-exposure asbestos cases. But the *Scapa* majority's opinion is not well-reasoned and is wrong on the science. Reversal is necessary to restore Georgia to the scientifically correct approach.

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<sup>1</sup> *Amicus* the Coalition for Litigation Justice consists of its members Century Indemnity Company; Chubb & Son, a division of Federal Insurance Company; Fireman's Fund Insurance Company; Great American Insurance Company; Nationwide Indemnity Company; Resolute Management, Inc. a third-party administrator for numerous insurers; and TIG Insurance Company.

Unlike historical asbestos litigation, which typically involved plaintiffs with years of heavy exposure to friable asbestos such as insulation, today's asbestos litigation today operates ever more frequently in a world of ultra-low and speculative exposures. Many of those claimed exposures frequently consist of nothing more than a few instances of handling asbestos material or sometimes merely passing by or witnessing an asbestos-containing product or operation. Mr. Knight's claimed exposures fall into this world.

Georgia's intermediate appellate court has now addressed this class of limited-exposure asbestos case twice – and produced two polar opposite opinions. The court that decided the 2012 *Butler*<sup>2</sup> case soundly and correctly rejected the unproven theory that every workplace exposure, no matter how minimal, contributes to causation. In contrast, the five-judge *Scapa*<sup>3</sup> majority let the experts testify to the same theory. (The *Scapa* dissent followed *Butler*.) In the process, the *Scapa* court let a jury verdict stand where no Plaintiff/Respondent expert even attempted to determine how much exposure Mr. Knight received at Scapa's facility and whether it constituted enough exposure to cause mesothelioma.

The extent of dose received from a particular jobsite or work activity, however, is the critical question in a multiple exposure case such as *Scapa*. As this

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<sup>2</sup> *Butler v. Union Carbide Corp.*, 310 Ga. App. 21, 712 S.E.2d 537 (Ga. App. 2011).

brief will demonstrate, it is not true that every contact with asbestos in Mr. Knight's life was a contributing cause. Exposures across a work history can differ dramatically, some in the more substantial realm (*e.g.*, extensive insulation work) and some trivial and inconsequential. Expert testimony is necessary to sort through these exposures and guide the jury in its decision. Declaring all such exposures as causative is wrong on the science and unhelpful to the jury.

Because of *Scapa*, the Georgia Court of Appeals is now deeply divided on how to address causation in asbestos cases involving limited exposures and multiple worksites.<sup>4</sup> And that confusion will create a crisis situation for Georgia trial courts – which opinion to follow? – because the next two decades of asbestos cases will increasingly involve the sort of speculative exposures with no dose assessment that the *Scapa* court would apparently find sufficient and the *Butler* court clearly would not. *Amici* respectfully request that the Court reverse the aberrant *Scapa* decision, clarify that *Butler* correctly states the rule of law in

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<sup>3</sup> *Scapa Dryer Fabrics v. Knight*, 332 Ga. App. 82, 87, 770 S.E.2d 334 (Ga. App. 2015).

<sup>4</sup> “Low” exposure cases as used in this brief is intended to refer generally to those exposures for which epidemiology studies have not documented an increased risk of disease. Such exposures typically involved bonded products or only tangential or infrequent work with asbestos-containing materials, as opposed to the years of employment in dusty trades and insulation work that have produced the vast majority of mesothelioma cases. “Low” exposure cases often involve exposures below even today’s OSHA standard of 0.1 f/cc and frequently cannot be distinguished from the background exposures that all persons experience.

Georgia, and instruct the state’s trial judges on the need for competent expert testimony in low exposure asbestos litigation.

The first step is to ensure that trial courts treat asbestos cases like any other toxic tort case by requiring adherence to the fundamental principle of *dose*. Plaintiffs’ experts must demonstrate, through a competent scientific assessment, that a plaintiff received a dose sufficient to cause the disease at issue – in this case, mesothelioma. As the concurrence in *Butler* stated, “The first question *Daubert* requires judges to ask is ‘where are the data?’ and failure to produce them should result in exclusion of the expert opinion.”<sup>5</sup> The *cumulative/any exposure* theory espoused by Respondents’ medical causation expert, Dr. Jerold Abraham, instead substitutes vague terms like “substantial” and “proximity” for real data – Dr. Abraham simply assumes that every workplace contact with asbestos is causative.

The second step in restoring asbestos litigation to a sound foundation is to ensure that trial judges are not forced to perform the role that experts like Dr. Abraham have abdicated – namely, assisting the jury in determining how much exposure from a particular workplace event is enough. The *Scapa* majority substituted itself for this missing expert testimony by deciding that the Scapa facility exposures were “substantial,” with no assistance from Dr. Abraham on such a complex industrial hygiene and medical issue. The court should instead

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<sup>5</sup> *Id. at 45.*

have functioned as gatekeeper – to ensure that *the experts do their job* and do it competently. The *Scapa* court should have dismissed the case, not rescued it.

*Amici* file this brief to explain why science mandates rejection of *any exposure* testimony. The contrary approach adopted by the *Scapa* majority will expand asbestos litigation into uncharted and unscientific territory. The Court should remedy this situation before jury verdicts in low dose cases become increasingly out of touch with medicine and tort principles.

### **ARGUMENT**

The majority opinion in *Scapa* departed from well-accepted scientific principles and toxic tort causation law in two key ways. First, the court allowed Dr. Abraham to testify that Mr. Knight’s work at the Scapa facility caused his disease, without ever asking and answering the questions *how much exposure did he receive* and *was this enough to cause cancer?* Second, since Dr. Abraham failed to do the expert’s job in this regard, the majority stepped in and decided for itself that Mr. Knight’s Scapa exposures were “substantial” and “not de minimis.” *Scapa Dryer Fabrics*, 770 S.E.2d at 340-41 (“Unlike *Butler*, however, this is a substantial exposure case.”).

The Court has granted certiorari and now has the opportunity to instruct lower courts to follow the analysis in the *Butler* opinion. A reversal of the *Scapa*

opinion will ensure that future asbestos litigation in Georgia does not go off the rails of a good scientific foundation.

**I. Any Exposure Testimony Is Not Consistent with Toxic Tort Causation and the Tenets of Science.**

Dr. Abraham engages in circular reasoning to reach his opinion as to which defendants' products or work activity the jury should consider a cause of mesothelioma. If a plaintiff has mesothelioma, Dr. Abraham reasons that asbestos is known to cause this disease, and asbestos fibers accumulate in the lung, so it must be true that every exposure, no matter how small, is part of causation. Thus, rather than answering the pressing question here – which of Mr. Knight's many workplace exposures during his career were sufficient actually to cause mesothelioma and which were inconsequential enough to exclude – he simply assumes that all of them were contributory. Claiming that all exposures contribute to causation just because they are cumulative is like assuming that a bucket of water thrown in the ocean contributes meaningfully to the size of the ocean.<sup>6</sup>

Dr. Abraham's reliance on this *cumulative exposure/any exposure theory*<sup>7</sup> is illogical and inconsistent with the most basic principles of science. It is thus

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<sup>6</sup> *Moeller v. Garlock Sealing Tech.*, 660 F.3d 950, 955 (6<sup>th</sup> Cir. 2011).

<sup>7</sup> The *any exposure* experts have recently begun disclaiming that they rely on the *any exposure* theory, even though they continue to espouse it, and instead now contend that they are only testifying that *this plaintiff's cumulative exposures* – all of them – are causative. This switch is a transparent attempt to dodge the many rulings excluding *any exposure* testimony. The fundamentals of the *cumulative*

unreliable and inadmissible under *Daubert*. Many courts, including the *Butler* court, have recognized the unscientific nature of *any exposure* testimony and required the experts to demonstrate a causative dose. In the coming wave of low-dose cases, such a standard will be critical to Georgia's asbestos jurisprudence.

**A. Carcinogens Such as Asbestos Are Dose Dependent.**

Asbestos, like any toxin including carcinogens (*e.g.*, radiation or tobacco smoke), requires some level of overall dose to produce disease. The human body is capable of defending itself against a whole array of small, daily exposures to known toxins. Disease results when those exposures reach a level that overwhelms our defenses, called the “threshold” point. Aspirin, alcohol, sunlight, even known poisons like arsenic are only poisonous if the dose is high enough to make them so. At lower doses, they are either harmless or beneficial. For this reason, toxicology rests on the bedrock principle that “the dose makes the poison.”<sup>8</sup> For toxicologists

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*exposure* theory, however, are exactly the same as the *any exposure* theory – the expert continues to avoid any dose assessment and simply declares that all of an individual plaintiffs' work or hobby exposures are a cause.

<sup>8</sup> Federal Judicial Center, *Reference Manual on Scientific Evidence Third Edition* at 403 (National Academies Press, 2011) (the “fundamental tenet” of toxicology). The “father of toxicology,” physician and philosopher Paracelsus, first articulated this principle in the 16<sup>th</sup> century, stating: “All substances are poisonous—there is none which is not; the dose differentiates a poison from a remedy.” David L. Eaton, *Scientific Judgment and Toxic Torts—A Primer In Toxicology For Judges And Lawyers*, 12 J.L. & POL'Y 5, 11 (2003).

“[d]ose is the single most important factor to consider in evaluating whether an alleged exposure caused a specific adverse effect.”<sup>9</sup>

This dose principle holds true for carcinogens like asbestos just as much as it does for any other toxin:

Most chemicals that have been identified to have “cancer-causing” potential (carcinogens) do so only *following long-term, repeated exposure for many years. Single exposures or even repeated exposures for relatively short periods of time (e.g., weeks or months) generally have little effect* on the risk of cancer, unless the exposure was remarkably high and associated with other toxic effects.<sup>10</sup>

Airplane passengers receive doses of radiation at high elevations beyond background, but scientists don’t ascribe cancer to those flights.<sup>11</sup> Foods often contain low levels of natural carcinogens not known to cause any harm. Science has cleared these “exposures” through the use of epidemiology studies that have found no link between such low-level exposures and cancer, even when the substance is without question a carcinogen at high doses.<sup>12</sup>

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<sup>9</sup> Eaton, *supra*, n. 8.

<sup>10</sup> *Id.* at 9 (emphasis added).

<sup>11</sup> See Health Physics Soc’y, *Radiation Exposure During Commercial Airline Flights* (2014), at <http://www.hps.org/publicinformation/ate/faqs/commercial-flights.html>; Health Physics Soc’y, *Airport Screening Fact Sheet* (2011), at [http://hps.org/documents/airport\\_screening\\_fact\\_sheet.pdf](http://hps.org/documents/airport_screening_fact_sheet.pdf) (compiling studies).

<sup>12</sup> Epidemiology is universally recognized as the “most desirable evidence” for assessing causation in the science of toxicology. Michael Green, *Expert Witnesses and Sufficiency of Evidence in Toxic Substances Litigation: The Legacy of the Agent Orange and Bendectin Litigation*, 86 NW. U. L. Rev. 643, 646 (1992); see also *id.* at 648. See Bert Black, *Epidemiologic Proof in Toxic Tort Litigation*, 52 FORDHAM L. REV. 732, 736 (1984) (“[E]pidemiology is the only generally accepted

Asbestos is no different. Asbestos fibers are ubiquitous in the environment and are part of the normal background exposure to potentially toxic substances we all receive. These “background” levels have never been shown to cause mesothelioma. In addition, many workers have received minor or low level asbestos exposures with no apparent harm. The cohorts that have exhibited documented levels of asbestos disease are typically those who worked in heavy exposure industries – the old “dusty trades” such as shipbuilding and repair, asbestos factories, and asbestos mining.<sup>13</sup> Some worker populations have not shown any increased asbestos disease despite working with asbestos their entire careers. For example, multiple studies of vehicle mechanics who worked with chrysotile-containing brake pads have never found a consistent increased incidence of mesothelioma.<sup>14</sup> South African chrysotile miners likewise have not

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scientific discipline . . . to identify and establish the causes of human diseases.”); Mary Andruet, *Proof of Cancer Causation in Toxic Waste Litigation: The Case of Determinacy Versus Indeterminacy*, 61 S. CAL. L. REV. 2075, 2088 (1988) (“The only valid way to identify human carcinogens and establish medical causation is to observe differences in the incidence of cancer between humans exposed to toxic wastes and those who are not.”).

<sup>13</sup> See Deborah Hensler *et al.*, *Asbestos Litigation in the U.S.: A New Look at an Old Issue* (RAND Corp. 2001).

<sup>14</sup> The studies are summarized and discussed in David Garabrant, *et al.*, *Mesothelioma among Motor Vehicle Mechanics: An Updated Review and Meta-analysis*, ANN. OCCUP. HYG. 1-19 (2015) (prepublication version available at <http://annhyg.oxfordjournals.org/>). See also Julian Peto *et al.*, *Occupational, Domestic and Environmental Mesothelioma Risks in Britain: A Case-Control Study*, UK HEALTH & SAFETY EXEC., at x (2009); Christine Rake *et al.*,

demonstrated a single case of mesothelioma despite decades of heavy mining exposures.<sup>15</sup> Chrysotile is the same fiber type found in Scapa’s dryer felts. OSHA’s asbestos standard today is *not* zero – it is 0.1 f/cc on an 8-hour time-weighted basis, meaning this is an “acceptable exposure” for a 45-year work life. The U.S. Environmental Protection Agency allows school children back into an asbestos-remediated school if exposures are below 0.01 f/cc – again not zero.<sup>16</sup>

Thus, it is *not true* that every exposure to asbestos has been shown to cause disease, or that there is no “safe” dose of asbestos, certainly not in the sense of actual causation.<sup>17</sup> Experts who come into court should be required to do more than rely on speculation that every exposure has contributed to disease. In both asbestos and other contexts, scientists regularly answer the critical question *how much is enough* by conducting exposure studies, from which they can determine whether those exposures reached the levels found to cause disease in comparable epidemiology studies (*e.g.*, of the same fiber type and similar exposure

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*Occupational, Domestic and Environmental Mesothelioma Risks in the British Population: A Case Control Study*, 100 BRIT. J. CANCER 1175, 1182 (2009).

<sup>15</sup> See David Rees, *Case Control Study of Mesothelioma in South Africa*, 35 AM. J. INDUS. MED. 213, 220 (1999).

<sup>16</sup> Asbestos Hazard Emergency Response Act (AHERA), 40 CFR Pt. 763, §763.90(i)(5).

<sup>17</sup> *Butler*, 310 Ga. App. at 41 (“The claim that there is no known safe level of exposure does not mean that none exists; it simply means that science today has not or cannot ... determine what that level of exposure is.”).

circumstances).<sup>18</sup> Expert testimony on carcinogens requires a reasonable assessment of the likely range of dose received by the worker and a determination as to whether this dose is comparable to amounts known (not speculated) to cause disease.<sup>19</sup> Georgia law requires no less. The science behind this is not simple, but the requirement of a dose assessment is as basic as it gets – no one would conclude that taking aspirin caused someone’s death without first *at least asking the question* how many aspirin are involved.

The *any exposure* theorists’ notion that all exposures must be considered causative simply because they accumulate is also illogical and unscientific. As even those experts will admit, the human body has many defenses in place to prevent ordinary exposures to carcinogens from producing cancerous tumors. As a

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<sup>18</sup> Courts routinely require plaintiffs to demonstrate “evidence from which the trier of fact could conclude that the plaintiff was exposed to levels of toxins **sufficient to cause the harm complained of.**” *Wintz v. Northrop Corp.*, 110 F.3d 508, 513 (7th Cir. 1997) (citing Reference Manual on Scientific Evidence) (emphasis added); *McClain v. Metabolife Int’l, Inc.*, 401 F.3d 1233, 1241 (11<sup>th</sup> Cir. 2005) (“In toxic tort cases, [s]cientific knowledge of the harmful level of exposure to a chemical, plus knowledge that plaintiff was exposed to such quantities are minimal facts necessary to sustain plaintiff’s burden.”).

<sup>19</sup> *Parker v. Brush Wellman, Inc.*, 1:08-CV02725, 2010 WL 3730924 at \*4 (N.D. Ga. 2010) (applying Georgia law) (in order to carry burden of proof, “a plaintiff must demonstrate the levels of exposure that are hazardous to human beings generally as well as the plaintiff’s actual level of exposure to the defendant’s toxic substance before he or she may recover”), *quoting Wright v. Willamette Indus.*, 91 F.3d 1105, 1106 (8<sup>th</sup> Cir. 1996), *aff’d on other grounds, Parker v. Schmiede Mach. and Tool Corp.*, 445 F. App’x. 231 (11<sup>th</sup> Cir. 2011); *see also Butler*, 310 Ga. App. at 39-40 (concurring opinion) (similarly quoting *Wright*).

result, as Professor Eaton instructs in his article above, many exposures are simply too small and inconsequential to contribute to any disease. A match thrown into a burning forest may “cumulate” into the single fire, and it is in some sense not possible to separate the match’s fire from the rest – but the match’s input into the overall fire is completely inconsequential. The many rainstorms preceding Hurricane Katrina added water to the levees and water bodies around the City, but those storms certainly did not contribute to the destruction of New Orleans in any meaningful way, for the fundamental reason that the City’s systems were perfectly capable of handling that level of inflow. The human body works the same way. No expert should be permitted to find “cause” in every input to a cumulative event.

To meet the reliability standard of *Daubert*, then, it is incumbent on experts like Dr. Abraham to answer, in a scientifically reliable manner, the “how much” question. If background isn’t enough, and if many exposed cohorts do not seem to incur asbestos disease, how much asbestos, and of what fiber type, must a specific work activity contribute to be meaningful for a causation analysis? And did plaintiff’s exposures at a particular job site cross this threshold?

It is true that the exact level of causation for asbestos is unknown (a point Respondents misstate to claim there is “no safe level of exposure”), but that does not mean the general range of causative and non-causative exposures is impossible

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to ascertain. Like many other toxic substance, for which the exact demarcation between disease and no disease is not crystal clear, scientists routinely make judgments about “safe” levels of exposure based on epidemiology and other studies. And asbestos is likely the most studied toxin in human history. There is no reason that these testifying experts should be allowed to jump to the unjustified conclusion that every occupational exposure, no matter how minimal, has to be a contributing cause. They do so for litigation purposes – to draw into lawsuits every possible defendant’s product, regardless of actual degree of contribution.

**B. Multiple Courts Have Rejected the *Any Exposure* Theory.**

Since 2005 many of the old asbestos thermal insulation manufacturers have gone into bankruptcy as a result of asbestos litigation. As a result, the plaintiffs’ bar has targeted bonded product and significantly lower-dose exposure scenarios in reliance on the *any exposure* theory with no credible science to support the causation arguments. In response, many courts nationwide have rejected the *any exposure* theory or similar *cumulative exposure* approach in asbestos and other toxic tort litigation.<sup>20</sup> The courts rejecting this theory include the Sixth Circuit Court of Appeals, the highest courts of Texas, New York, Pennsylvania, Nevada,

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<sup>20</sup> For a survey of *any exposure* opinions and issues, see Mark Behrens & William Anderson, *The “Any Exposure” Theory: An Unsound Basis for Asbestos Causation and Expert Testimony*, 37 Sw. U. L. Rev. 479 (2008); William Anderson, Lynn Levitan & Kieran Tuckley, *The “Any Exposure” Theory Round II*

and arguably Virginia, and trial and appellate courts in Florida, Delaware, Ohio, Louisiana, Mississippi, Utah, California, Washington, North Carolina, and Pennsylvania. Some highlights of those rulings include the following:

- The Supreme Court of Pennsylvania has soundly rejected *any exposure* testimony three times, calling the theory a “fiction” and requiring experts to prove a causative dose.<sup>21</sup>
- The Virginia Supreme Court held that experts “must opine as to what level of exposure is sufficient to cause mesothelioma, and whether the levels of exposure at issue . . . were sufficient.”<sup>22</sup>
- The Texas Supreme Court (twice) and two Texas intermediate courts have considered multiple aspects of the *any exposure* theory and plaintiff arguments for it, and have rejected all of them.<sup>23</sup>

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– *Court Review of Minimal Exposure Expert Testimony in Asbestos and Toxic Tort Litigation Since 2008*, 22 Kan. J. L. & Pub. Policy 1 (2012).

<sup>21</sup> See *Betz v. Pneumo Abex LLC*, 44 A.3d 27 (Pa. 2012). See also *Gregg v. V-J Auto Parts Co.*, 943 A.2d 216 (Pa. 2007); *Howard ex rel. Estate of Ravert v. A.W. Chesterton, Inc.*, 78 A.3d 605 (2013). Some of these courts, such as Pennsylvania, rely on the *Frye* standard rather than *Daubert*. Although the analysis is analytically distinct, these *Frye* courts provide valuable criticisms of the scientific basis and lack of logical thinking behind the *any exposure* theory that applies across all jurisdictions. See *Butler*, 310 Ga. App. at 27 (relying on *Frye* decision as lending “credence” to the conclusion that the “no threshold” theory was unscientifically reliable).

<sup>22</sup> *Ford Motor Co. v. Boomer*, 736 S.E.2d 724, 733 (Va. 2013). See also *Wannall v. Honeywell Int’l, Inc.*, 292 F.R.D. 26 (D.D.C. 2013) (applying *Boomer*), *aff’d*, 775 F.3d 425 (D.C. Cir. 2014).

- The federal Sixth Circuit Court of Appeals has rejected *any exposure* testimony four different times, both in asbestos cases and otherwise.<sup>24</sup>
- Multiple federal district courts have rejected *any exposure* testimony under the same standard, *Daubert*, that applies in Georgia.<sup>25</sup>

This is not the first time an appellate court has examined *any exposure* testimony as applied to Scapa's dryer felts. The Ninth Circuit Court of Appeals last year reversed an \$11 million trial verdict rendered in part against Scapa. The grounds for reversal were that the trial judge did not perform a sufficiently rigorous *Daubert* review of expert testimony, including the *any exposure* approach. See *Estate of Barabin v. AstenJohnson, Inc.*, 740 F.3d 457, 464-65 (9<sup>th</sup>

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<sup>23</sup> See *Bostic v. Georgia-Pacific Corp.*, 439 S.W.3d 332 (Tex. 2014); *Flores v. Borg-Warner Corp.*, 232 S.W.3d 765, 772 (Tex. 2007); *Georgia-Pacific Corp. v. Stephens*, 239 S.W.3d 304 (Tex. App.-Houston 2007); *Smith v. Kelly-Moore Paint Co., Inc.*, 307 S.W.3d 829 (Tex. App. 2010).

<sup>24</sup> See *Bartel v. John Crane, Inc.*, 316 F. Supp. 2d 603 (N.D. Ohio 2004), *aff'd sub nom. Lindstrom v. A-C Prod. Liab. Trust*, 424 F.3d 488 (6th Cir. 2005); *Moeller v. Garlock Sealing Tech., LLC*, 660 F.3d 950 (6th Cir. 2011); *Martin v. Cincinnati Gas & Elec. Co.*, 561 F.3d 439 (6th Cir. 2009); *Pluck v. BP Oil Pipeline Co.*, 640 F.3d 671 (6th Cir. 2011) (benzene).

<sup>25</sup> See, e.g., *Yates v. Ford Motor Co.*, \_\_\_ F.Supp.3d \_\_\_, 2015 WL 3948303 (E.D.N.C., June 29, 2015); *Smith v. Ford Motor Co.*, No. 2:08-CV-630, 2013 WL 214378 (D. Utah Jan. 18, 2013); *Sclafani v. Air & Liquid Sys. Corp.*, No. 2:12-CV-3013, 2013 WL 2477077 (C.D. Cal. May 9, 2013); *In re W.R. Grace & Co.*, 355 B.R. 462 (Bankr. D. Del. 2006), *appeal denied*, 2007 WL 1074094 (D. Del. Mar. 26, 2007); *Henricksen v. ConocoPhillips Co.*, 605 F. Supp. 2d 1142 (E.D. Wash. 2009) (benzene); *Comardelle v. Penn Gen. Ins. Co.*, No. 13-6555, 2015 WL 64279 (E.D. La., Jan. 5, 2015).

Cir.), *cert. denied*, 135 S. Ct. 55 (2014). The *Scapa* court's equally cursory examination of Dr. Abraham's approach does not meet *Daubert's* requirements.<sup>26</sup>

Recent opinions continue to extend the reach of the courts refusing to allow *any exposure* testimony. In April of this year one of the New York City asbestos docket judges excluded all *cumulative exposure* testimony in brake cases. See *Juni v. A.O. Smith Water Prods.*, 11 N.Y.S.3d 416, 2015 WL 1840006 (N.Y. Sup. Ct. New York Cnty., Apr. 13, 2015). As that court stated: "That mesothelioma is caused only by exposures to asbestos does not dispose of the issue of whether a defendant's product caused the mesothelioma ... which depends on the sufficiency of the exposure, if any, to asbestos in the defendant's product and whether that exposure is capable of causing mesothelioma." *Id.* at \*15. The same point applies to the alleged *Scapa* exposures in this premises case. In June 2015 a North Carolina federal district court reviewed the studies and logic underlying a plaintiff expert's conclusion that all "cumulative" exposures were causative, and found the opinion entirely lacking in reliability under *Daubert*.<sup>27</sup> That court also

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<sup>26</sup> The *Scapa* panel summarily concluding that Dr. Abraham used a "scientific investigation" to reach his conclusions. *Op.* at 14. Yet the court did not examine a single one of Dr. Abraham's studies, assess the lack of referenced support for his methodology, test or examine the logic of any of his conclusions, or apply any of the four *Daubert* factors. The *Scapa* panel's approach is much more akin to the cursory trial court approach in *Barabin* than a serious *Daubert* analysis of any exposure testimony, as in the recent North Carolina *Yates*, Louisiana *Comardelle* and *Davidson*, and Utah *Smith* opinions.

<sup>27</sup> *Yates*, 2015 WL 3948303 at \*8-\*11.

rejected testimony based on the mere presence of “dust” as sufficient – and “dust” is a large part of Appellees’ claimed exposures in this case. *Id.* at \*8-\*9.

There are many reasons, set forth in detail in the above opinions, that so many courts have rejected precisely the type of testimony Dr. Abraham provided here. *Cumulative any exposure* testimony (1) is illogical because it ignores these experts’ own admission that background exposures also accumulate in the lungs but are *not* causative; (2) assumes improperly that disease caused at high levels of exposure would also occur at much lower doses with no evidence that it does; (3) disregards the difference in fiber potency by treating chrysotile exposures (*e.g.*, Mr. Knight’s dryer felt) the same as amphibole exposures such as insulation; (4) and has no epidemiology studies to support the notion that even the lowest levels of exposure are causative. The *any exposure* theory eliminates plaintiff’s ordinary burden of proof – plaintiff need only claim breathing “dust,” and then defendants must prove those exposures non-causative. In fact, none of these experts has ever published the notion that any amount of workplace exposure, or the mere breathing of dust, must be considered causative – they only express these opinions in court. Georgia law should require more.<sup>28</sup>

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<sup>28</sup> *Parker v. Brush-Wellman*, 2010 WL 3730924 at \*5 (“It is not ... Defendant’s responsibility to disprove exposure; rather, it is Plaintiff’s burden to prove *actual* exposure.”). See David E. Bernstein, *Getting to Causation in Toxic Tort Cases*, 74 BROOK. L. REV. 51, 59 (2008) (recent any exposure opinions

**C. Georgia Law Needs to Reflect Basic Causation Principles.**

*Amici* urge the Court to reverse the *Scapa* decision and affirm that *Butler* states the law correctly. Georgia law needs to incorporate a more reasonable causation rule than “every exposure counts” because the asbestos docket is quickly becoming a never-ending stream of speculative and trivial exposure cases. Mr. Knight, for instance, unlike the insulators common in prior year asbestos cases, apparently did not even handle much, if any, asbestos material himself. His case seems to be largely built on the idea that he was in the vicinity (with no actual distances provided) of material that contained asbestos, and even then only on a few occasions. *Scapa Dryer Fabrics*, 770 S.E.2d at 338-39; *see* Petitioners’ Brief at 25-30. These “mere presence” cases involve very little or no exposure. That is why experts like Dr. Abraham avoid assessing the dose – there is not enough to support the case.

The number of real asbestos-induced mesothelioma cases is decreasing because the workers who were exposed to significant amounts of asbestos (*i.e.*, those prior to the advent of OSHA in 1971) are aging out. Instead, the bulk of today’s docket increasingly consists of younger persons, including many women, who can only claim extremely minor exposures such as watching a husband perform a few backyard brake jobs, or who can only speculate that they may have

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acknowledge that *de minimis* exposure to asbestos should not suffice for

breathed some asbestos because it was in a building somewhere. These mesotheliomas are not the result of asbestos exposures.<sup>29</sup>

Nevertheless, the *any exposure* theory permits these trivial or minimal exposure cases to get to a jury. Many states and federal courts, as noted above, have decided to draw the line on this unwarranted expansion of asbestos litigation. Without *any exposure* testimony, plaintiffs would have to meet the same standard any other plaintiff would in a toxic tort case – *i.e.*, by proving a causative dose. In contrast, the *any exposure* theory, if allowed to support a case like *Scapa*, would place a strict liability legal obligation on a premises owner like *Scapa* – *Scapa* would be obliged to compensate anyone who could claim to have been “in proximity” (with no standard for that term) of asbestos in its plant, or who merely

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causation).

<sup>29</sup> An increasing proportion of these cases are likely spontaneous, produced by errors in the human body’s transcription of DNA billions of times in reproducing cells. The medical literature fully documents the existing of spontaneous cases, for all cancers and for mesothelioma specifically. See Stanley Venitt, *Mechanisms of Spontaneous Human Cancers*,”104 *Environ. Health Persp.* 633, 633, 635 (1996), article available at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1469658/>; Christian Tomasetti, and Bert Vogelstein, *Variation in Cancer Risk Among Tissues Can Be Explained by the Number of Stem Cell Divisions*, 347 *SCIENCE* 78 (Jan. 2015) ; B.T. Mossman *et al.*, *Asbestos: Scientific Developments and Implications for Public Policy*, 247 *SCIENCE* at 294 (1990) (“approximately 20 to 30% of mesotheliomas occur in the general population in adults not exposed occupationally to asbestos”). See, *e.g.*, *Butler*, 310 Ga. App. at 41 (acknowledging role of spontaneous mesotheliomas).

saw “dust” in the plant, with no further proof of negligence or causation. The Court should draw the line against this testimony as other courts have.<sup>30</sup>

The Court should also eliminate the loose usage of highly general terms such as “in proximity,” “visible dust,” and “substantial exposure” – the language of Dr. Abraham and the *Scapa* court – from the lexicon of Georgia’s asbestos cases.<sup>31</sup> As used in cases like *Scapa*, these intentionally vague terms allow plaintiffs and their experts to whitewash their lack of any real exposure evidence. Georgia law requires, *at a minimum*,<sup>32</sup> “close proximity” for an asbestos case to proceed, but this standard surely requires at least some testimony on how close or how far plaintiff was from the source – not just a magic incantation of those words. The “close proximity” test also must be viewed as a floor – not the full extent of

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<sup>30</sup> The *any exposure* theory also does not suffice under Georgia’s “contributing factor” test as set forth in *John Crane, Inc. v. Jones*, 278 Ga. 747 (2004). The expert and court must still draw a line between exposures that meaningfully contribute and those that do not – “proximate cause is an essential element of the plaintiff’s case....” *Id.* at 751.

<sup>31</sup> See, e.g., *Parker v. Mobile Oil Corp.*, 7 N.Y.3d 434, 449-50 (N.Y. 2006) (expert’s opinion that plaintiff was “frequently” exposed to “excessive” amount of benzene, without foundation, “cannot be characterized as a scientific expression of Parker’s exposure level”); *Sterling v. P&H Mining Equip.*, No. 1006 EDA, 2015 WL 1743156 at \*4 (Pa. Super. Apr. 17, 2015), at 8 (plaintiff testimony that he “saw dust” insufficient with no proof that dust contained asbestos, multiple potential other sources of dust in industrial facility, no testimony as to distance from dust, etc.); *Yates*, 2015 WL 3948303 at \*8-\*9 (critiquing and rejecting expert’s reliance on “visible dust” as a basis for causation finding).

<sup>32</sup> *Hoffman v. AC&S Inc.*, 248 Ga. App. 608, 611 (2001); *but see Butler*, 310 Ga. App. at 31 (*Hoffman* “close proximity test” is “the basic, threshold requirement for recovery;” declining to allow case to proceed on mere exposure testimony).

plaintiff's obligations. In addition to proximity, the actual distance from the source is critical, as is the actual dose associated with the claimed exposure based on the duration, extent, and frequency of the exposures, and the potency of the fiber type. Any approach that ignores these fundamentals of science and dose must be considered speculative and unscientific.

*Amici* thus request that the Court use this opportunity to clarify that in low-dose litigation plaintiffs must assess and establish a causative dose before proceeding to trial, even if plaintiff can claim to have breathed "dust" or seen asbestos-containing materials in some number of workplace occasions.

## **II. The *Scapa* Court Departed from Toxic Tort Causation Principles and Improperly Took on the Role Abandoned by Respondents' Experts.**

The *Scapa* panel departed from standard scientific principles and toxic tort causation rules by deferring to Dr. Abraham's opinions rather than testing them as a gatekeeper should. This approach is the exact opposite of what *Daubert* requires. The court then compounded the error by supplying the missing element of Dr. Abraham's testimony – the *court itself* determined that the exposures were sufficient for causation in this case (and that those in *Butler* were not). These two errors are more than sufficient to reverse the ruling and instead to adopt the analysis and approach in *Butler* of requiring the *expert* to make these determinations. The *Butler* approach is consistent with the overwhelming number of decisions in other courts.

**A. The Court Should Have Required a Dose Assessment Rather than Merely Contrasting the *Butler* and *Scapa* Exposure Scenarios.**

The *Scapa* court's ruling turns on a distinction between this case and *Butler* – that *Butler* involved only trivial or de minimis exposures and *Scapa* involved “substantial” exposures. Simply applying labels to different exposure scenarios, however, is not a substitute for a competent assessment of the dose. A scientific assessment to test this conclusion would have involved an analysis of many factors that the *Scapa* court did not even begin to address. All of those factors are essential in determining whether in fact Mr. Knight's exposures at Scapa were substantial in a causative sense rather than inconsequential.

The analysis has to start with the level of exposure at the source itself. No plaintiff expert even commented on this factor, and the court relied instead on the presence of mere “dust.” (*Scapa*'s evidence indicated that exposures immediately next to these felts were well below regulatory standards.) The distance from the source is also critical. Mr. Knight did not handle the dryer felts himself, so the next critical component is his distance from the source. Exposures drop to inconsequential levels quickly the farther from the source the worker is. Neither Dr. Abraham nor the court required any evidence of Mr. Knight's actual distance or its effect on exposures.

Dr. Abraham and the court also failed to assess the duration and frequency of Mr. Knight's supposed exposures. As Professor Eaton advises, *supra* n. 8, and

common sense dictates, a few limited exposures to carcinogens are unlikely to produce disease. Mr. Knight's testimony indicates that his contact with asbestos, if any, was of short duration and only occurred on a few instances, but the plaintiff experts and *Scapa* panel failed to assess this factor. And finally, Dr. Abraham and the court failed to consider the actual potency of the fiber types involved. Dryer felt is made from chrysotile, a very weak carcinogen that only causes mesothelioma, if at all, in cohorts with enormous exposure.<sup>33</sup> Mr. Knight could not possibly have achieved such exposures at *Scapa*, yet neither Dr. Abraham nor the court credited the potency differential in any way.

There is nothing scientific about Dr. Abraham's approach. It ignores every standard precept of industrial hygiene. The outcome is pure speculation – that Mr. Knight *may* have breathed *some* asbestos fibers at *an unknown level* only *a few times*. This is not dose assessment. And the guesswork that results is why many courts are rejecting this approach and requiring a real assessment of the dose.

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<sup>33</sup> Chrysotile is at best only a very weak carcinogen, and one that has not produced mesothelioma at all except in the very highest exposed worker groups. *See, e.g., In re Garlock Sealing Tech., LLC*, 504 B.R. 71,76, 78 (Bank. W.D.N.C. 2014) (chrysotile is “far less toxic than other forms of asbestos”); *Bartel v. John Crane, Inc.*, 316 F. Supp. 2d at 605); *In re Asbestos Litig.*, 911 A.2d 1176, 1181 (Del. Super. Ct. 2006). *See also* Christine Rake *et al.*, *Occupational, Domestic and Environmental Mesothelioma Risks in the British Population: A Case Control Study*, 100 BRIT. J. CANCER 1175 (2009) (“The mesothelioma risk caused by amosite (brown asbestos) is two orders of magnitude greater than that by chrysotile (white asbestos).”).

Respondents and the *Scapa* panel decided that no dose assessment was necessary for several reasons, all of which are difficult to understand. For example, Respondents assert that no dose assessment is possible because no one measured Mr. Knight's actual exposures at the time. A professional industrial hygienist would scoff at this claim, because these professionals routinely reconstruct historical doses by working from studies of similar occupations and work experiences.<sup>34</sup> To give only one example, a recent article, relying on a set of historical exposure studies of asbestos workers, developed a very detailed assessment of the amount of exposure likely to have occurred based on distance from the source.<sup>35</sup> Dr. Abraham ignored this and similar studies. Based on published literature and *Scapa*'s own air monitoring, it is likely that Mr. Knight's actual dose would fall below background levels given that *Scapa* could not detect measurable asbestos only feet away from the dryer felts.

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<sup>34</sup> This rationale is also very convenient – it is unlikely in the extreme that a specific plaintiff in litigation today will have his or her own exposures measured in the 1950s, 1960s, or 1970s. Many of the scenarios in today's litigation involve exposures well below the OSHA standards of the time that would never have even necessitated any testing. Thus, plaintiffs' experts can self-justify their speculation in virtually every case. If this rationale is accepted, then the more reasonable conclusion is that plaintiffs' experts have no exposure assessment on which to base their opinions to begin with.

<sup>35</sup> Ellen Donovan, *et al.*, *Evaluation of Bystander Exposures to Asbestos in Occupational Settings: A Review of the Literature and Application of a Simple Eddy Diffusion Model*, 1 CRITICAL REV. TOXICOLOGY 1 (2010).

Likewise, Respondents argued in their appellate court opposition brief that Georgia does not require an exact quantification of the dose. Perhaps, but that is a long way from abandoning any attempt at all to assess the range of possible exposures. Mr. Knight's approximate range of exposures can potentially be characterized in fiber/cc year levels given sufficient testimony about his activities, location, and duration of work. And if there is no such testimony, then that plaintiff apparently cannot recall sufficient direct contact with asbestos to prove a case, and the case should not proceed. Even the case Respondents rely on – *Fulmore* – stands only for the proposition that plaintiffs do not need to provide a “specific measurement” of the worker's actual exposures – *i.e.*, an actual air monitoring record of the plaintiff himself. But *Fulmore* and other Georgia cases mandate that experts at least assess and estimate the dose in a competent way and prove that it was enough to be causative.<sup>36</sup>

**B. The *Scapa* Panel Erred in Accepting Any Exposure Testimony.**

Given the widespread rejection of testimony like Dr. Abraham's in other courts, reversal is justified here because the *Scapa* court allowed such testimony to supplant the need for an assessment of Mr. Knight's actual exposures. A review of the court's grounds for doing so only bolsters the need for reversal.

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<sup>36</sup> *Parker v. Brush Wellman, Inc.*, 2010 WL 37300924 at \*4; *Butler*, 310 Ga. App. at 39-40 (concurring opinion).

The *Scapa* majority relied first and foremost on a distinction between *Butler*'s "trivial" exposures and Mr. Knight's alleged "substantial" exposures. But the appellate court's fundamental distinction is in error, because *any exposure* testimony left the court without any assessment of Mr. Knight's actual exposures sufficient to make that critical distinction. No one can say that an exposure is "substantial" without assessing the dose to begin with and comparing it to published health standards for asbestos or to health studies of populations that actually got asbestos disease. "Substantial" is totally meaningless otherwise. This is exactly how New York's highest court handled the *Parker* benzene case, when the experts simply used qualitative words like "excessive" instead of determining plaintiff's dose. *Parker v. Mobil Oil*, 7 N.Y.3d 434, 449-50 (N.Y. 2006).

To add to this error, the distinction the *Scapa* court tried to draw between the exposure scenarios of *Butler* and *Scapa* is nonexistent. In fact, just the opposite assessment – that Mr. Knight's exposures were in fact *less substantial* than in *Butler* – is easy to construct. Consider the following points taken from the two opinions. Mr. Butler *directly handled* the asbestos containing material (molding compound pellets containing up to 30 percent asbestos) (310 Ga. App. at 21), whereas Mr. Knight apparently was only in some undefined "proximity" to known asbestos-containing material. Mr. Butler handled *135,000 pounds of asbestos containing materials* (*id.* at 22); Mr. Knight apparently directly handled very little,

if any, asbestos- containing material. Mr. Butler worked with the asbestos- containing pellets daily for over seven years (*id.*); Mr. Knight was only in the presence of asbestos materials a handful of times at Scapa. An expert in *Butler* testified that his exposures would have exceeded the two fibers/cc OSHA standard of the time (*id.* at 22-23) – there was no such testimony or even assessment in *Scapa*. The material Mr. Butler used without question contained asbestos (*id.* at 22); but Mr. Knight could only speculate that the dust on the HVAC equipment and insulation he worked with contained asbestos, because he did not know and no expert ever confirmed this.

The point of this comparison is to show the fallacy in a court or an expert using words like “substantial” unaccompanied by any dose assessment. The *Scapa* court’s approach would permit wildly different asbestos judgments on similar sets of facts and leave defendants at the mercy of whether a judge, in his or her own layperson’s perspective, thought the exposures were substantial or not. The actual *Butler-Scapa* comparison if anything only undercuts the justification of the *Scapa* court – the exposures in both *Butler* and *Scapa* were equally inconsequential. *Any exposure* testimony was no more justified in one than the other.

**C. The Court Should Not Have Substituted Its Own Judgment for the Missing Expert Testimony Needed to Support Causation.**

With no guidance from Dr. Abraham on how to determine which of Mr. Knight’s exposures in his career were sufficient for causation, the *Scapa* court

should have dismissed the case against Scapa because of the lack of competent expert causation testimony.<sup>37</sup> The court instead committed a second fundamental error. The panel determined for itself that the exposures at the Scapa facility were “substantial” and therefore sufficient to allow *any exposure* testimony.

The error in this approach is that the court has taken on the complex and difficult role of determining how much exposure is enough to be considered “substantial” and causative of a latent cancer occurring decades after the claimed exposure. The trial judge, however, should be the gatekeeper of expert testimony, not sit in the expert’s seat and render a causation determination. Decisions on the degree and type of exposure necessary to cause mesothelioma are the subject of hundreds of scientific articles and intense medical debate in the literature. Professionals in several fields – epidemiology, toxicology, occupational medicine, oncology, industrial hygiene, and others – regularly apply their expertise and extensive knowledge to assess, for instance, whether a long-term exposure to chrysotile could ever be considered a cause of mesothelioma.<sup>38</sup> For the court here

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<sup>37</sup> *Butler*, 310 Ga. App. at 30 (“Causation is an essential element of a toxic tort case .... Absent reliable expert testimony that exposure to a ... product contributed to the development of Mr. Butler’s mesothelioma, there is insufficient evidence to create a jury issue as to causation.”); *Parker v. Brush-Wellman*, 2010 WL 3730924 at \*8 (excluding expert; “this is not a case which could be informed by the juror’s human experience alone to prove causation”).

<sup>38</sup> See, e.g., J. Hodgson, & A. Darnton, *The Quantitative Risks of Mesothelioma and Lung Cancer in Relation to Asbestos Exposure*, 46 ANN.

to simply declare Mr. Knight's exposures "substantial" is quite a leap, given the degree of scientific knowledge necessary to make such a determination. The court's leap is even more dramatic given the complete lack of any industrial hygiene analysis by either Dr. Abraham or the *Scapa* panel – the level of exposure at the source, the distance from the source, the quantity of exposure over time, the infrequency of the exposure, any comparison with health standards or lifetime exposures authorized by health authorities.

Consider what trial judges must now do in Georgia if the *Scapa* decision holds. Trial judges will have to decide with no help from *any exposure* experts whether ten brake jobs is enough to be "substantial" and thus suffice for *any exposure* testimony. And what if the next case involves only five? Would six months of work in a facility, with only one or two identified contacts with asbestos suffice? Or should the court require daily contact in such a circumstance?

The answers to these and an infinite number of similar questions lie in the science of dose, exposure, and epidemiology. A trial court, given an expert attempt to make such decisions, can perform the required gatekeeping function and decide whether the expert's analysis of the data is based on a reliable methodology. But where the expert, like Dr. Abraham, simply refuses to perform this analysis at all, there is nothing for the court to work with. The court should not have tried to

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OCCUP. HYG. 565 (2000) (extensive analysis of level and types of fibers causing asbestos disease); Peto and Rake articles, *supra* n. 14.

fill in the gap created by this testimony, and instead should have dismissed the case for lack of adequate expert causation testimony.

### **CONCLUSION**

Georgia should follow the lead of so many other *Daubert* jurisdictions and require experts to perform their required role – assess the dose, demonstrate why it is causative, and forego merely claiming all of plaintiff’s cumulative exposures are causative. *Any exposure* testimony is unscientific and cannot help the jury make the hard decisions in these cases. The *Butler* court got it right, the *Scapa* court did not, and *Amici* request that the Court grant the Petitioners’ request to avoid the *Scapa* impact of extending asbestos cases into ever more trivial and speculative exposure scenarios without scientific foundation.

Respectfully Submitted,

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*Admitted Pro Hac Vice*

Dated: October 21, 2015

**CERTIFICATE OF SERVICE**

This is to certify that I served all counsel of record with a copy of this BRIEF OF *AMICI CURIAE* COALITION FOR LITIGATION JUSTICE, INC., CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA, NATIONAL ASSOCIATION OF MANUFACTURERS, AMERICAN TORT REFORM ASSOCIATION, AND NFIB SMALL BUSINESS LEGAL CENTER by e-mail, addressed as follows:

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