

981 A.2d 531 (2009)**GENERAL MOTORS CORPORATION and Ford Motor Company, Defendants Below, Appellants,****v.****Roland Leo GRENIER, Sr., Plaintiff Below, Appellee.**Nos. 453, 2007, 578, 2007.**Supreme Court of Delaware.**

Submitted: June 15, 2009.

Decided: August 24, 2009.

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Before STEELE, Chief Justice, HOLLAND, BERGER, JACOBS, Justices and NOBLE, Vice Chancellor,^[*] constituting the Court en Banc.

BERGER, Justice, for the majority:

This is an appeal from a jury verdict in favor of Roland Leo **Grenier**, Sr., a former auto mechanic who is suffering from mesothelioma, a fatal form of lung cancer. **Grenier** alleged that dust from brake shoes and other friction products manufactured by Ford Motor Company caused his illness.^[1] Ford's principal argument is that the trial court abused its discretion in admitting **Grenier's** expert testimony. After concluding that the trial court made some factual errors in analyzing the experts' methodology and opinions, this Court remanded to allow the trial court to reconsider its decision. On remand, the trial court addressed each of this Court's concerns and reaffirmed its decision. Under the applicable abuse of discretion standard, we defer to that decision. In addition, we find no merit to Ford's remaining claims. Accordingly, we affirm.

FACTUAL AND PROCEDURAL BACKGROUND

Grenier was an auto mechanic for 36 years, working with clutches and brakes. In the course of grinding, removing and replacing these "friction products," **Grenier** was exposed to chrysotile, a form of asbestos. In 2005, **Grenier** was diagnosed with diffuse malignant mesothelioma. He filed this action against Ford and numerous other companies, alleging that defendants wrongfully exposed him to inherently dangerous products which caused his fatal illness.

Before trial, the Superior Court held a four day *Daubert*^[2] hearing on a consolidated motion to exclude expert causation testimony in all cases against friction product manufacturers. The Superior Court denied the motion after extensively

analyzing the experts' methodologies and conclusions. At trial, **Grenier** relied on the testimony of Richard A. Lemen, Ph.D. to establish that friction products cause mesothelioma. Ford presented epidemiological studies demonstrating that exposure to friction products does not increase the risk of suffering lung disease. The jury returned a \$2 million verdict in favor of **Grenier**. This appeal followed.

536 After briefing and argument, this Court determined that the trial court's *Daubert* decision was based, in part, on facts not supported in the record. As a result, we remanded with instructions that the trial court reconsider and clarify its decision. This Court explained that, "[i]n the interest of justice, we . . . seek a clear guarantee that [the trial court] adequately fulfilled the gatekeeping duties *Daubert* and *536 D.R.E. 702 mandate."^[3] The trial court issued a Report on Remand^[4], in which it carefully reviewed the earlier inaccuracies, and again concluded that **Grenier's** expert causation testimony was sufficiently reliable to be presented at trial.

DISCUSSION

In *Daubert v. Merrell Dow Pharmaceuticals, Inc.*^[5], the United States Supreme Court held that Federal Rule of Evidence 702 superseded the *Frye* standard for determining the admissibility of expert scientific testimony. Rule 702 provides a more flexible framework under which the trial court, as "gatekeeper," must decide "whether the reasoning or methodology underlying the testimony is scientifically valid and . . . whether that reasoning or methodology properly can be applied to the facts in issue."^[6] *Daubert* identified several factors the trial court should consider, including "testing, peer review, error rates, and 'acceptability' in the relevant scientific community. . . ."^[7] But the trial court has "broad latitude" to determine whether any or all of the *Daubert* factors are "reasonable measures of reliability in a particular case. . . ."^[8] The trial court's decision to admit or exclude expert evidence is reviewed for abuse of discretion, and "[t]hat standard applies as much to the trial court's decisions about how to determine reliability as to its ultimate conclusion."^[9] Because Delaware Rule of Evidence 702^[10] is identical to the federal rule, this Court adopted *Daubert*, and its progeny, as the law governing the admissibility of expert evidence.^[11]

The parties agree that friction products contain chrysotile, and that unrefined chrysotile causes mesothelioma. The factual question is whether chrysotile that has been used in friction products also causes mesothelioma. Ford argues that **Grenier's** expert testimony is unreliable because: 1) the experts made an unsupported assumption that the chrysotile found in friction products is indistinguishable from unrefined chrysotile; and 2) all existing epidemiological studies contradict **Grenier's** expert opinions.

537 Dr. Ronald F. Dodson, a researcher who has studied asbestos diseases for more than 30 years, testified at the *Daubert* hearing that the chrysotile in friction products is no different than unrefined chrysotile. Dodson based that opinion on his own research, published in a peer-reviewed journal. He found that washing both worn and new friction products released respirable chrysotile fibers. He *537 found comparable asbestos fibers in the lung tissue of an individual who worked on clutches. Dodson also testified that his findings were consistent with the findings published in other, peer-reviewed papers.

In its original *Daubert* decision,^[12] the trial court stated that Dodson had "considered the surface characteristics of the fibers and concluded that there is no basis to distinguish the surface characteristics of friction fibers from those of other chrysotile fibers."^[13] But Dodson did not analyze the surface charge or surface chemistry of the friction fibers, and he agreed that surface characteristics affect carcinogenicity. In its Report on Remand, the trial court explained that Dodson "determined that the morphology (form and structure), size and shape of asbestos fibers, were the primary factors that explained the 'carcinogenicity' of asbestos, including chrysotile."^[14] This finding, which is supported in the record, provides the necessary scientific basis on which Dodson concluded that, because the morphology, size and shape of respirable chrysotile fibers released from friction products was the same as that of unrefined chrysotile, the two forms of chrysotile should be equally carcinogenic. Like many scientific opinions, Dodson's conclusion is open to dispute. But it is not mere speculation — it is the product of reliable scientific methodology.

Lemen is an epidemiologist and industrial hygienist who, like Dodson, has been studying asbestos for more than three

decades. He testified about the limitations of epidemiology in studying a disease like mesothelioma, which is very rare and is a "signature" disease. The trial court summarized Lemen's opinions:

In determining issues of general association or increased risk with regard to toxicity of a particular substance, epidemiologists consider several perspectives including mechanism of injury, the biological activity of the substance, toxicology and pathology studies, and animal experimentation. They also consider "case reports," which are reports of individual cases. These reports are of more significance in cases of rare "signature" or "sentinel" diseases like mesothelioma. In such instances, the "case report" offers significant guidance because the general association between the substance (e.g., asbestos) and the disease (e.g., mesothelioma) is well established in the scientific community. . . . Dr. Lemen is of the view that the epidemiological evidence on this subject is equivocal and that other data, including that which is contained in the case reports, offer a more definitive answer to the general causation question.

* * * *

With respect to automotive friction products specifically, Dr. Lemen has reported on more than 165 published cases that support the conclusion that exposure to friction products can cause mesothelioma. He is of the view that exposure to chrysotile from friction products is no different than exposure to other chrysotile-containing products.^[15]

In its Report on Remand, the trial court expanded on Lemen's methodology:

538 *538 Dr. Lemen employed sound methodology (including Bradford Hill) to conclude that exposure to chrysotile causes disease. He conducted research to determine that friction products contain significant amounts of chrysotile asbestos, and conducted further research to conclude that working with friction products (both in the installation and removal of the product) can release respirable chrysotile fibers in amounts sufficient to cause disease.

* * * *

[**Grenier's**] experts, including Dr. Lemen, testified that they had exhaustively researched the available data that addressed the question of whether exposure to asbestos-containing friction products can cause disease and throughout the data they found no reliable evidence to support a hypothesis that all fibers released from friction products were somehow structurally or chemically different from unrefined chrysotile fibers in a manner that would render them incapable of causing disease. . . . [S]ince Dr. Lemen's "assumption" [that friction fibers have the same biological propensities as unrefined chrysotile] was based on an absence of reliable evidence within a large fund of scientific data, it was a well founded assumption upon which he was entitled to rely.^[16]

At the risk of over-simplification, it is fair to say that **Grenier's** experts determined that: 1) respirable chrysotile fibers are released from friction products; 2) those friction fibers are the same size and shape as unrefined chrysotile; 3) the fibers' morphology is the primary attribute affecting carcinogenicity; and 4) comparable fibers were lodged in the lung tissue of people who had worked with friction products and had mesothelioma. From these facts, the experts concluded that the chrysotile from friction products is no less carcinogenic than unrefined chrysotile. The experts considered Ford's contention that something in the manufacturing process rendered the chrysotile non-carcinogenic, but they found no scientific data to support that theory. In sum, **Grenier's** experts employed reliable methodology, based on what is known and inferences derived by the scientific method. Accordingly, we find no abuse of discretion in the trial court's decision to admit their testimony.

In addition to its *Daubert* claim, Ford argues that it is entitled to judgment as a matter of law, or at least a new trial, for other reasons. Specifically, Ford contends that: 1) **Grenier** failed to prove general causation; 2) **Grenier** concealed evidence of alternative causes of his illness; 3) the trial court abused its discretion in making several evidentiary rulings; 4) the trial court gave an erroneous instruction to the jury; and 5) **Grenier** gave an inflammatory closing argument. We find no

merit to these arguments.

539 Ford's general causation claim is largely a restatement of its *Daubert* claim. **Grenier** was required to prove that Ford's friction products are capable of causing mesothelioma.^[17] Because **Grenier** introduced no epidemiological studies that found general causation, Ford argues that it was entitled to judgment as a matter of law. Ford relies on *Richardson v. Richardson-Merrell, Inc.*,^[18] and other similar cases, for the proposition that case reports and experimental studies are unreliable, *539 and that such evidence is legally insufficient "in the face of . . . overwhelming . . . contradictory epidemiological evidence."^[19] But *Richardson* addressed the admissibility of a particular expert opinion — that Bendectin causes birth defects. Because the proffered opinion was based on "suspicions" derived from animal studies and from the general knowledge that antihistamines are "capable of adversely affecting human development,"^[20] the court found that particular opinion unreliable. As Ford concedes, there is no *a priori* requirement that an expert opinion be based on epidemiology in order to be admissible. Here, the trial court determined that **Grenier's** experts' opinions were reliable and, thus, admissible. Those opinions provided the necessary evidence of causation.

Ford argues next that it should have been granted a new trial based on newly-discovered evidence. After trial, Ford learned that **Grenier** filed two claims against other companies alleging that he contracted mesothelioma from his exposure to those other companies' non-friction asbestos products. But well before trial Ford knew that **Grenier** had been exposed to non-friction products from 30 other manufacturers, and that he had filed claims against some of them. At trial, Ford used **Grenier's** list of other asbestos exposures to argue to the jury that his work with non-friction products caused the mesothelioma. Because the two new claims would have been cumulative, the trial court correctly decided that the new evidence probably would not have changed the result, and that a new trial was not warranted. We agree.

Ford also contends that the trial court abused its discretion in several evidentiary rulings. First, Ford says that the "Gold Book" should not have been admitted because it is unreliable hearsay. The Gold Book is a 1986 publication by the Environmental Protection Agency titled, "Guidance for Preventing Asbestos Disease Among Auto Mechanics." It is a simply worded pamphlet that describes how auto mechanics could be exposed to asbestos fibers, what diseases they may contract, and what can be done to control their exposure to asbestos. The pamphlet cites 37 sources of information, including articles by scientists, and reports by the EPA and other federal agencies. The trial court found that the Gold Book is sufficiently trustworthy to qualify as an exception to the hearsay rule and that it would be admissible if **Grenier's** experts reasonably relied on it.

D.R.E. 803(8) provides an exception to the hearsay rule for "reports, statements or data compilations, in any form, of a public office or agency setting forth . . . factual findings resulting from an investigation made pursuant to authority granted by law." The EPA is a public agency; the Gold Book is a report that sets forth factual findings; and the EPA has authority to collect and disseminate information on asbestos.^[21] Thus, we find that the trial court acted within its discretion in admitting the Gold Book.

540 Second, Ford complains that the trial court precluded it from presenting evidence that the Kent cigarettes that **Grenier** smoked 60 years ago had a "micronite" filter, which was made of toxic asbestos. When the trial court ruled, it understood that Kent made cigarettes with several different filters during the time span in question, and there was no evidence that **Grenier** had smoked the cigarettes *540 with the micronite filter. Given that record, the trial court decided that Ford's proposed evidence was too speculative. But, if Ford could demonstrate that it was more likely than not that **Grenier** smoked cigarettes with the micronite filter, the trial court ruled that the evidence would be allowed. Ford never attempted to make that showing to the trial court.

On appeal, Ford references articles establishing that the micronite filter was the only type of filter used during most of the 1950s. Ford says that, even without presenting those articles to the trial court, it should have been allowed to cross-examine on the micronite filter's toxicity because it had a good faith basis for its line of questioning. We disagree. Without some evidence that **Grenier** actually smoked a cigarette with the micronite filter, the trial court correctly determined that testimony about the toxic effects of micronite filters was too speculative, and therefore inadmissible.

Next, Ford argues that the trial court should have excluded evidence that it, and the other defendants, spent \$19 million on

experts. Ford says that this information is highly prejudicial and, because it includes money paid to experts who did not testify in this trial, is also irrelevant. We are satisfied that the trial court acted within its discretion in admitting the evidence. The source of funding for scientific research is a factor to be considered in assessing the reliability of the scientific conclusions. Thus, whether the money was spent on experts who testified at this trial or not, it is relevant. As for prejudice, there is no evidence that Ford was seriously disadvantaged, since it used the same tactic against **Grenier**. During closing, Ford pointed out that Lemen made over \$2 million just "for coming into Court."

Ford's final evidentiary claim is that the trial court should not have admitted a 1948 article written by a General **Motors** industrial hygienist, because the article was not properly authenticated. At a pretrial hearing, Ford argued that the article, which was supposed to be a synopsis of a speech, included references to asbestos that were not in the original speech. Ford presented no material supporting its argument, noting only that it had filed a motion in limine on this point but the court had not ruled on it. The court stated:

All right. I'm going to let it in as an admission against interest and the fact that it may or may not be an accurate statement of what was said, I just can't address now. I'm going — I would have to look at a transcript of what was said the the — if there is such a thing. I would have to look at evidence that this does not accurately reflect the statement, but it appears to me to be admissible as not hearsay.^[22]

Grenier argues that Ford waived this claim because it never objected at trial. Ford says that the trial court ruled, and there was no need for it to object again at trial.

We think that a fair reading of the trial court's statement is that it was allowing the article into evidence, but leaving open the prospect that Ford would renew its objection and provide the supporting transcript, or evidence, that was lacking at the pretrial conference. Based on this interpretation, we do not find that Ford waived its objection, which is well founded. But the erroneous admission of one document does not warrant a new trial. We must "consider whether the mistake[]

541 constituted significant prejudice so *541 as to have denied [Ford] a fair trial."^[23] We are satisfied that the erroneous introduction of the General **Motors** article was cumulative and not so prejudicial as to justify a new trial.

Ford's next argument is that the trial court erred in responding to a question raised by the jury during deliberations. The jury asked whether it could have any of the studies or published papers to review. After discussing the jury's request with counsel, the trial court responded, "No, these documents have not been admitted as evidence."^[24] Ford objected, arguing that the jury might misinterpret the court's response to mean that none of the contents of the scientific studies had been admitted. In fact, portions of those studies were read into the record through expert witnesses. Ford asked the court to add the statement, "Scientific evidence is admitted through expert testimony." The trial court declined.

We review the trial court's decision whether to give a supplemental instruction for abuse of discretion. The adequacy of the instruction, itself, is subject to *de novo* review.^[25] "[J]ury instructions need not be perfect they must rather give a correct statement of the law and be reasonably informative and not misleading when read as a whole."^[26] The trial court's response to the jury's question was an accurate statement of the law. It might have been more helpful to the jury had the court included Ford's proposed addition. But the response, as given, was neither misleading nor inaccurate.

Finally, Ford argues that it is entitled to a new trial because **Grenier's** closing argument was inflammatory. Ford complains that **Grenier**: 1) read excerpts from a document not in evidence; 2) repeatedly referred to the \$19 million spent on defense experts; 3) referred to **Grenier's** family standing at his grave site after the cancer kills him; and 4) referred to **Grenier's** son having been in the courtroom throughout the trial. Ford says that each comment was improper, and that the cumulative effect of all the comments was to inflame the jury to render a verdict based on passion or prejudice instead of the evidence.^[27]

542 *542 We review the denial of a motion for a new trial based on improper comments of counsel for abuse of discretion.^[28] Three of the four alleged improprieties require little comment. The excerpt from a document not in evidence was read to a witness during cross-examination, and was used in closing to summarize certain of Lemen's conclusions. It was a short statement and was not inflammatory. We discussed the references to Ford's \$19 million expenditure earlier and found that

they were not improper. Ford never objected to the comment about **Grenier's** son being in the courtroom, and we are satisfied that the comment does not rise to the level of plain error.

The comment about the family standing at **Grenier's** grave site, however, was improper. **Grenier** claims it did not make that statement to invoke sympathy, but we find **Grenier's** argument disingenuous. **Grenier** told the jury:

I want to turn to another topic now and that's compensation for Mr. **Grenier**. . . . We, the plaintiffs, are not looking for one iota of money for sympathy. Not one penny. The family will get all the sympathy they need when they stand at Roland **Grenier's** grave site after this cancer kills him. They don't want sympathy.^[29]

Although carefully couched in language that asks for no sympathy, the point of that comment was to remind the jury that **Grenier** was dying and to invoke the image of his family standing over his grave — in order to garner sympathy. In deciding whether an improper comment is "significantly prejudicial so as to deny [Ford] a fair trial,"^[30] we consider "(1) the closeness of the case, (2) the centrality of the issue affected by the error, and (3) the steps taken in mitigation."^[31] Applying this standard, we find that Ford was not denied a fair trial. The case was not about whether **Grenier** was dying — Ford acknowledged that mesothelioma is fatal. Thus, one isolated comment invoking sympathy during a long summation was not central to the case. Even if the case was close, and despite the trial court's failure to give a curative instruction, we are satisfied that Ford was not seriously prejudiced.^[32]

CONCLUSION

Based on the foregoing, the judgment of the Superior Court is hereby affirmed.

STEELE, Chief Justice dissenting:

I agree with the majority that we review the motion judge's decision to admit **Grenier's** proffered experts for abuse of discretion.^[1] I disagree, however, with the majority's conclusion because I believe that *543 the motion judge abused his discretion by admitting **Grenier's** experts' opinions.

The majority and I differ on the significance of the motion judge's gatekeeping role under *Daubert v. Merrell Dow Pharmaceuticals, Inc.*^[2] The majority concludes that the motion judge may conclude that an expert's opinion is reliable testimony after assessing only whether the proffered expert is qualified in a recognized field in which he intends to testify, and that his work product has been peer reviewed. The majority concludes that if the motion judge is so satisfied, then the expert's opinion is reliable and may be admitted.

After a four day *Daubert* hearing in this case, the motion judge concluded that the "plaintiffs' medical and scientific evidence. . . is sufficiently reliable to pass through the *Daubert* filter, and that the proper manner by which to challenge the plaintiffs' theories, and to expose their weaknesses, is through vigorous cross examination of the plaintiffs' expert witnesses."^[3] The majority agrees with the motion judge that vigorous cross examination of an expert's methodology underlying his opinion will allow the jury to ferret out the truth of disputed opinions proffered by opposing experts.

I disagree. The motion judge's gatekeeping role does not end when he rules that the proffered expert is qualified to testify in a particular field. An expert may be qualified in a field and his work may have been commented on by other experts, but that alone does not demonstrate that a sound, verifiable methodology underlies an opinion in a particular case. The motion judge must also assess the methodology supporting the proffered expert's opinion to assure that the opinion is verifiable and therefore reliable. I conclude that the motion judge abused his discretion by allowing the jury to hear expert opinion testimony before completing the *Daubert* analysis and without sufficient factual support for the proposition that the expert derived his view from a validated, reliable methodology.

DISCUSSION

A. Experts Must Provide Reliable Testimony that Focuses on the Facts of the Case

Delaware Rule of Evidence 702 governs the admissibility of expert testimony and permits the presentation of "scientific, technical or other specialized knowledge" if it "will assist the trier of fact to understand the evidence or to determine a fact in issue."^[4] To be admissible, "(1) the testimony [must be] based upon sufficient facts or data, (2) the testimony [must be] the product of reliable principles and methods, and (3) the witness [must have] applied the principles and methods reliably to the facts of the case."^[5] Because D.R.E. 702 is substantially similar to Federal Rule of Evidence 702, we chose, in M.G. Bancorporation v. Le Beau,^[6] to follow the United States Supreme Court's interpretation of F.R.E. 702 in Daubert v. Merrell Dow Pharmaceuticals, Inc.^[7] In Daubert, the United States Supreme Court held that F.R.E. 702 requires trial judges to *544 "ensure that any an all scientific testimony. . . is not only relevant, but reliable."^[8]

To fulfill the role of gatekeeper, the trial judge must determine whether:

- (1) the witness is qualified as an expert by knowledge, skill experience, training or education;
- (2) the evidence is relevant and reliable;^[9]
- (3) the expert's opinion is based upon information reasonably relied upon by experts in the particular field;
- (4) the expert testimony will assist the trier of fact to understand the evidence or to determine a fact in issue; and
- (5) the expert testimony will not create unfair prejudice or confuse or mislead the jury.^[10]

As the gatekeeper, a trial judge must determine "whether an expert's testimony `has a reliable basis in the knowledge and experience of [the relevant] discipline."^[11] Just because an expert is qualified in a field does not automatically make his opinion reliable.^[12] Expert testimony "must be supported by appropriate validation — *i.e.*, `good grounds,' based on what is known," and all "inference[s] or assertion[s] must be derived by the scientific method."^[13] Scientific knowledge requires more than unsupported speculation.^[14] The trial judge must determine whether the expert, though qualified in his field, can produce a sufficiently informed opinion that is testable and "verifiable on the issue to be determined at trial."^[15] Only after the trial judge determines that the expert proffers a "relevant, reliable, validated, and, therefore, trustworthy" opinion, can the expert offer his opinion to the jury and be cross examined on the basis for his opinion.^[16] When considering whether a proffered expert presents a *reliable* opinion, trial judges must focus on the "`principles and methodology' used in formulating an expert's testimony, not on the expert's resultant conclusions."^[17]

Though an expert's conclusion need not be consistent, the expert must have applied his principles and methods *reliably* to the facts of the case.^[18] The Daubert Court provided a nonexhaustive list of factors for trial judges to consider in determining whether scientific testimony is sufficiently reliable:

- (1) whether a theory or technique can or has been tested;
- (2) whether it has been subjected to peer review and publication;
- *545 (3) whether a technique had a high known or potential rate of error and whether there are standards controlling its operation; and
- (4) whether the theory or technique enjoys general acceptance within a relevant scientific community.^[19]

Ordinarily, scientific testing is a key consideration for a trial judge in determining reliability because testing a hypothesis separates science from other fields of human inquiry.^[20] Whether the hypothesis has been published in a peer reviewed

journal "will be a relevant, though not dispositive, consideration in assessing the scientific validity of a particular technique or methodology on which an opinion is premised."^[21] The known rate of error and whether the scientific community accepts the hypothesis can also have some bearing on reliability.^[22]

In this case, I believe the motion judge abused his discretion when he permitted Drs. Lemen and Dodson to offer conclusory opinions without providing the principles and methodology testing the opinions that would suggest that those opinions were reliable. After finding that the experts were qualified to testify in their field, the motion judge should have evaluated their proffered testimony to ensure that it had good grounds in reliable scientific methodology.^[23] Drs. Lemen and Dodson merely opined that it was possible that fibers from friction products could cause disease because verified science has established that fibers from nonfriction products cause disease—a classic *ipse dixit*.

Grenier's experts did not offer evidence to satisfy *Daubert's* first reliability indicator of whether the principle or methodology underlying the opinion can or has been tested.^[24] Dr. Lemen did not provide any testable principles or methodology to support his assumption, yet, the motion judge permitted his opinion testimony. Drs. Lemen and Dodson conceded that they could not prove that fibers from friction products caused disease, but they speculated that those fibers could because there was no evidence to suggest otherwise. The motion judge, therefore, had no proposition other than the negative on which he could rely to consider whether the experts' opinions have been or even could be tested in order to find those opinions reliable.^[25]

Though **Grenier's** experts purportedly relied on peer review studies, another *Daubert* reliability indicator,^[26] those studies did not test his experts' actual hypothesis: whether asbestos fibers from friction products could cause disease. Dr. Lemen relied on studies from Drs. Langer and McCaughley and reports from the World Health Organization and the World Trade Organization to conclude that friction products can release unaltered chrysotile fibers, however, those studies did not allow him to conclude that those unaltered fibers did cause cancer. He relied on Bradford Hill studies to conclude that exposure to general chrysotile fibers cause disease. When he applied the Bradford Hill considerations, *546 he did not account for fibers being altered by friction. Yet, he then opined that fibers from *friction* products could cause disease because there was no evidence suggesting that the fibers were different that the fibers from nonfriction products. Dr. Lemen also relied on an Australian Tumor registry to conclude that there was an "exceptionally high risk" of disease among automobile mechanics; however, he noted that the studies had significant shortcomings and were equivocal. According to Dr. Lemen himself, none of the studies demonstrated a positive association between friction products and mesothelioma.^[27] Those studies applied no validating methodology to verify whether chrysotile fibers from friction products cause disease in automobile workers.^[28]

Similarly, Dr. Dodson concluded through his own research and peer review studies that friction products may release chrysotile fibers as well as inert fibers. He opined that chrysotile fibers from nonfriction products cause disease. He assumed that chrysotile fibers from friction products could cause disease on the sole proposition that there was no evidence contradicting his hypothesis. Dr. Dodson did not consider the surface charge or surface chemistry of the friction fibers when he assumed that friction fibers would have the same toxicity as nonfriction fibers. *Yet, both Drs. Lemen and Dodson acknowledged that surface characteristics affect the toxicity of fibers.* Despite that acknowledgement and the absence of any independent validating testing of their own, neither Dr. Lemen nor Dr. Dodson provided peer review studies to bolster the reliability of their hypothesis that fibers subjected to friction cause disease.^[29] This flaw in **Grenier's** experts' opinions is critical. Peer review studies that do not apply to the facts of the case do not provide a testable, verifiable hypothesis.^[30] They can hardly, under these circumstances, validate non-existent studies by the testifying experts.

No other listed *Daubert* reliability indicators were present. The experts did not profess that they had a technique with a high known or potential rate of error and whether there are standards controlling its operation.^[31] Both the experts and the motion judge conceded that the theory that friction products cause disease was a speculative hypothesis that had yet to be proved. The experts did not offer a theory or technique which enjoys general acceptance within a relevant scientific community that could validate their hypothesis.^[32]

547 In his Report on Remand, the motion judge assumed that the lack of evidence discounting Drs. Lemen's and Dodson's speculation fortified their speculation.^[33] This approach incorrectly shifts the focus *547 from an examination of what the experts offer to support their opinion to the absence of information to discredit those views. The motion judge should have excluded the experts because they did not provide a reliable methodology (either their own or another) to support their conclusion. Without a testable methodology to support their conclusion, their respective opinions were conclusory or merely speculative.

B. The Burden of Proof Rests on the Party Proffering the Expert

The motion judge compounded the error of admitting **Grenier's** experts by placing a burden on Ford to disprove **Grenier's** experts' opinions' admissibility. The party proffering an expert bears the burden of establishing that the expert's opinions are admissible by a preponderance of the evidence.^[34] As stated, part of proffering an expert is establishing that the expert can support his conclusion with reliable, verifiable science.^[35] The motion judge erred by putting the onus on Ford to counter **Grenier's** experts at the *Daubert* hearing rather than assume that **Grenier's** experts could only offer an expert opinion after establishing at the *Daubert* hearing that their conclusions were based on sound, reliable, verifiable scientific bases. In effect, the ruling emasculated the concept of a gate keeper's role.

Because I disagree that **Grenier's** expert's testimony satisfied *Daubert*, I conclude that the motion judge abused his discretion when he allowed Drs. Dodson and Lemen to offer opinion testimony. Dr. Lemen was **Grenier's** sole causation expert. Admitting his unreliable opinion testimony constituted reversible error.

[*] Sitting by designation pursuant to art. IV, § 12 of the Delaware Constitution and Supreme Court Rules 2 and 4(a) to fill up the quorum as required.

[1] General **Motors** Corporation also was named as a defendant, and had joined in the appeal. But General **Motors** filed for bankruptcy protection earlier this year. As a result, the claim against General **Motors** has been stayed. See: 11 U.S.C. § 362.

[2] See, generally, *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993).

[3] *General Motors Corporation v. Grenier*, 981 A.2d 524, 2009 WL 267665 at *6 Fn. 7 (Del. Supr.).

[4] *In re Asbestos Litigation*, 2009 WL 1034487 (Del. Super.).

[5] 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993).

[6] *Id.* at 592-93, 113 S.Ct. 2786.

[7] *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 141, 119 S.Ct. 1167, 143 L.Ed.2d 238 (1999).

[8] *Id.* at 153, 119 S.Ct. 1167.

[9] *Id.* at 152, 119 S.Ct. 1167.

[10] D.R.E. 702 provides: "If scientific, technical or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training or education may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case."

[11] *M.G. Bancorporation, Inc. v. Le Beau*, 737 A.2d 513, 521 (Del. 1999).

[12] *In re Asbestos Litigation*, 911 A.2d 1176 (Del. Super. 2006).

[13] *Id.* at 1203.

[14] 2009 WL 1034487 at *5 (Citing PX 205 at 264 "it has been long known that it is not the chemical composition of the various asbestos fibers that is important in their ability to produce disease, the health effects of asbestos are related primarily to their morphology, their shape and size.").

[15] 911 A.2d at 1189-91.

[16] [In re Asbestos Litigation](#), 2009 WL 1034487 at *8.

[17] [In re Rezulin Prods. Liab. Litig.](#), 369 F.Supp.2d 398 (S.D.N.Y.2005).

[18] 857 F.2d 823 (D.C.Cir.1988).

[19] *Id.* at 830.

[20] *Ibid.*

[21] See: 15 U.S.C. § 2609.

[22] Appellants' Appendix, A00548.

[23] [Potter v. Blackburn](#), 850 A.2d 294, 297 (Del.2004).

[24] Appellants' Appendix, A 755.

[25] See: [Sammons v. Doctors for Emergency Servs.](#), 913 A.2d 519, 540 (Del.2006); [Sheeran v. State](#), 526 A.2d 886, 893 (Del. 1987).

[26] [Chrysler Corp. v. Chaplake Holdings, Ltd.](#), 822 A.2d 1024, 1034 (Del.2003) (Quotations and citations omitted.).

[27] Ford raised its objections to **Grenier's** closing argument after the arguments had concluded and after the jury had been sent to deliberate. In doing so, it followed the court's instruction: "I would like to remind counsel in this jurisdiction objections during closing arguments are strongly disfavored. If necessary, counsel may ask for the opportunity to place objections on the record at the close of arguments, but in civil cases I ask that there be objections during the closing arguments only under the most extreme of circumstances." (Appellee's Supplemental Appendix, SA-78).

This Court has consistently required that any objections be made contemporaneously. Failure to do so waives any claim of error. The reasoning is simple: "A party must timely object to improper statements made during closing argument in order to give the trial court the opportunity to correct any error." [Medical Center of Delaware, Inc. v. Lougheed](#), 661 A.2d 1055,1060 (Del. 1995); See, also: [Koutoufaris v. Dick](#), 604 A.2d 390, 400 (Del. 1992) ("[T]he failure of opposing counsel to make a contemporaneous objection deprived the trial judge of the opportunity to deal with the problem *when it arose*. Such inaction is deemed a waiver of any resulting error for appellate purposes.") (Emphasis added.); [Delaware Electric Coop., Inc. v. Duphily](#), 703 A.2d 1202, 1210 (Del.1997).

We trust that the trial court will not advise counsel against contemporaneous objections in the future.

[28] [Dunn v. Riley](#), 864 A.2d 905, 906 (Del. 2004).

[29] Appellee's Appendix, B-311-12.

[30] [DeAngelis v. Harrison](#), 628 A.2d 77, 80 (Del. 1993) (Quotations and citations omitted.).

[31] *Id.* at 81. (Quotations and citations omitted.).

[32] Because we do not agree that there were multiple improper remarks, we need not address the cumulative effect of the remarks. For the same reason, we need not address the cumulative effect of all the alleged errors raised on appeal.

[1] [M.G. Bancorporation v. Le Beau](#), 737 A.2d 513, 522 (Del. 1999) (citing [Gen. Elec. Co. v. Joiner](#), 522 U.S. 136, 146, 118 S.Ct. 512, 139 L.Ed.2d 508 (1997)).

[2] 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993).

[3] [In re Asbestos Litig.](#), 911 A.2d 1176, 1180 (Del.Super.2006).

[4] D.R.E. 702.

[5] *Id.*

[6] 737 A.2d at 521-22.

[7] 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993).

[8] *Id.* at 589, 113 S.Ct. 2786.

[9] *Id.* at 590-94, 113 S.Ct. 2786.

[10] [Bowen v. E.I. DuPont de Nemours & Co.](#), 906 A.2d 787, 795 (Del.2006) (citing [Tolson v. State](#), 900 A.2d 639, 645 (Del.2006); [Eskin v. Carden](#), 842 A.2d 1222, 1227 (Del.2004)).

[11] *Id.* at 794.

[12] [Eskin](#), 842 A.2d at 1228; see [Goodridge v. Hyster Co.](#), 845 A.2d 498, 503 (Del.2004).

[13] [Daubert](#), 509 U.S. at 590, 113 S.Ct. 2786; see D.R.E. 702 (expert testimony requires reliable principles and methods that are applied to the facts of the case).

[14] [Daubert](#), 509 U.S. at 590, 113 S.Ct. 2786.

[15] [Eskin v. Carden](#), 842 A.2d 1222, 1228 (Del. 2004); see also [Daubert](#), 509 U.S. at 593, 113 S.Ct. 2786 (whether a theory or technique will assist the trier of fact as scientific knowledge will often rely on whether it can and has been tested).

[16] [Potter v. Blackburn](#), 850 A.2d 294, 299 (Del.2004) (quoting [Mason v. Rizzi](#), 2004 WL 439690, at *4 (Del.)).

[17] [Bowen v. E.I. DuPont de Nemours & Co.](#), 906 A.2d 787, 794 (Del.2006) (citing [Daubert](#), 509 U.S. at 595, 113 S.Ct. 2786).

[18] D.R.E. 702.

[19] [Daubert](#), 509 U.S. at 590-94, 113 S.Ct. 2786.

[20] *Id.* at 593, 113 S.Ct. 2786.

[21] *Id.* at 594, 113 S.Ct. 2786.

[22] *Id.*

[23] D.R.E. 702; [Daubert](#), 509 U.S. at 590, 113 S.Ct. 2786.

[24] See [Daubert](#), 509 U.S. at 593, 113 S.Ct. 2786 (trial judge can consider whether a method can or has been tested for reliability).

[25] *Id.*

[26] See *id.* at 593-94, 113 S.Ct. 2786 (trial judge can consider peer review studies for reliability).

[27] [General Motors v. Greiner](#), C.A. No. 05C-11-257, at * 14 (Del.2009) (Remanding Appeal).

[28] D.R.E. 702; [Eskin v. Carden](#), 842 A.2d 1222, 1228 (Del.2004).

[29] See [Daubert](#), 509 U.S. at 593-94, 113 S.Ct. 2786 (trial judge can consider peer review studies for reliability).

[30] D.R.E. 702; [Eskin](#), 842 A.2d at 1228; see also [Daubert](#), 509 U.S. at 593, 113 S.Ct. 2786 (whether a theory or technique will assist the trier of fact as scientific knowledge will often rely on whether it can and has been tested).

[31] See [Daubert](#), 509 U.S. at 594, 113 S.Ct. 2786 (trial judge can consider a known rate of error for reliability).

[32] See *id.* (trial judge can consider general acceptance for reliability).

[33] [In re Asbestos Litig.](#), C.A. No. 05C-11-257, 2009 WL 1034487, at *5-5, 8, 9-10 (Del.Super.2009) (Report on Remand).

[34] [Bowen v. E.I. DuPont de Nemours & Co.](#), 906 A.2d 787, 795 (Del.2006) (citations omitted).

[35] [Daubert](#), 509 U.S. at 590, 113 S.Ct. 2786; [Bowen](#), 906 A.2d at 794; [Eskin](#), 842 A.2d at 1228.

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