Exxon Corp. v. Makofski

Court of Appeals of Texas, Fourteenth District, Houston

July 24, 2003, Judgment Rendered ; July 24, 2003, Majority and Dissenting Opinions Filed

NO. 14-00-00763-CV

Reporter
116 S.W.3d 176 *; 2003 Tex. App. LEXIS 6411 **; 59 Oil & Gas Rep. 84

EXXON CORPORATION, Appellant and Cross-Appellee V. JAMES MAKOFSKI, SR., AS NEXT FRIEND OF JAMES MAKOFSKI, JR.; BARTON RUSSELL, AS NEXT FRIEND OF JOHN RUSSELL; ANDREA RUSSELL; SAN JUANITA DEVORA; FELIPE DEVORA; AND CODI STENNETT, Appellees and Cross-Appellants

Subsequent History: Petition for review denied by *Devora v. Exxon Corp., 2004 Tex. LEXIS 575 (Tex., June 25, 2004)*

Prior History: [1]** On Appeal from the 269th District Court. Harris County, Texas. Harris County, Texas. Trial Court Cause No. 93-04644-A.

Disposition: Reversed and Rendered.

Core Terms

reliability, benzene, trial court, exposure, disease, epidemiological, scientific, causation, expert testimony, pretrial, no evidence, confidence, lake, leukemia, anemia, statistically significant, cross-examination, pretrial hearing, appellate record, trial record, mental anguish, gatekeeper's, skin, appellate court, unreliable, cancer, evidentiary hearing, asthma, juror, evidentiary

Case Summary

Procedural Posture
Cross-appeals were taken from judgments of the 269th District Court, Harris County (Texas), which, in post-judgment proceedings, reduced or eliminated jury awards in favor of plaintiffs, residents of a community where a water well had become contaminated by pollution caused by defendant oil company's predecessor.

Overview
The residents alleged that benzene in their drinking water caused various health problems. The jury, finding the oil company negligent and grossly negligent, awarded a large sum in actual and punitive damages. In post-judgment proceedings, the trial court reduced or eliminated most of the jury awards, rendering take-nothing judgments against four adults and reducing the amount of judgments for two minors. The court, after examining several epidemiological studies upon which the residents relied, concluded that the evidence was insufficient to establish causation. None of the studies established a statistically significant doubling of the risk of childhood leukemia from exposure to benzene, and there was no significant epidemiological information on other health effects of long-term exposure to low levels of benzene. Moreover, Texas law did not permit recovery of mental anguish damages for fears related to developing diseases that had not occurred and were not shown to be likely.

Outcome
The court affirmed the setting aside of the judgments for the adult residents, reversed the judgment in favor of the minors, and rendered judgment that all of the residents take nothing.

LexisNexis® Headnotes

Civil Procedure > ... > Standards of Review > Substantial Evidence > General Overview

Evidence > Admissibility > Expert Witnesses > Daubert Standard

Evidence > Admissibility > Scientific Evidence > Standards for Admissibility

Evidence > ... > Testimony > Expert

Witnesses > General Overview

HN1 Standards of Review, Substantial Evidence

An appellate court considers all the evidence in the light most favorable to the verdict, and indulges every reasonable inference in that direction. But the appellate court does not take expert testimony at face value; if it is unreliable, it constitutes no evidence, and the appellate court must reverse.

Civil Procedure > Appeals > Record on Appeal

Evidence > Admissibility > Scientific Evidence > General Overview

Civil Procedure > ... > Standards of Review > Substantial Evidence > General Overview

Civil Procedure > ... > Standards of Review > Substantial Evidence > Sufficiency of Evidence

HN2 Appeals, Record on Appeal

Generally, unless an appellant files a complete reporter's record (or a limited appeal), the appellate court presumes the omitted portions are relevant and support the jury's verdict. But a complete record does not include matters from other proceedings; an appellate court normally tests the legal sufficiency of a jury verdict by the evidence at the jury trial, not by what happened before or after it.

Evidence > ... > Testimony > Expert Witnesses > General Overview

Torts > ... > Elements > Causation > Causation in Fact

HN3 Testimony, Expert Witnesses

Scientifically reliable epidemiological studies showing more than a doubling of the risk may establish a causation link. To benefit from this exception to the normal rules requiring individual proof of causation, a claimant must show a similar exposure to the subjects studied and exclude other plausible causes with reasonable certainty.

Evidence > Admissibility > Scientific Evidence > General Overview

Torts > ... > Elements > Causation > Causation in Fact

Evidence > ... > Testimony > Expert Witnesses > General Overview

HN4 Admissibility, Scientific Evidence

Even statistically significant associations in an isolated study are no evidence of causation, as scientific methodology requires some confirmation.

Evidence > Admissibility > Scientific Evidence > General Overview

Torts > ... > Elements > Causation > Causation in Fact

Evidence > ... > Testimony > Expert Witnesses > General Overview

HN5 Admissibility, Scientific Evidence

Plausibility is not enough. Courts must be especially skeptical of scientific evidence that has not been published or subjected to peer review.

Torts > ... > Pain & Suffering > Emotional Distress > Evidence

Torts > ... > Compensatory Damages > Types of Losses > Medical Expenses

Torts > ... > Types of Losses > Pain & Suffering > General Overview

Torts > ... > Pain & Suffering > Emotional Distress > General Overview

HN6 Emotional Distress, Evidence

Texas law prohibits recovery for future diseases unless there is a reasonable medical probability the disease will occur. It also prohibits recovery of mental anguish damages for an increased risk of developing a disease that is not presently manifest.

Counsel: For Appellants: Clinard J. Hanby, Spring, TX.

Pamela Stanton Baron, TX.

For Appellees: John O'Quin, Houston, TX. Robert Alan York, Houston, TX. David Holman, Houston, TX. W. Mark Lanier, Houston, TX.

Judges: Panel consists of Chief Justice Brister and Justices Edelman and Seymore. (Seymore, J. dissenting).

Opinion by: Charles W. Seymore

Opinion

[*179] MAJORITY OPINION

Among the hundreds of wells drilled in the Tomball Field northwest of Houston in the 1930s, one was found to be leaking oil and gas into an underground aquifer in 1939. Humble Oil & Refining Company attempted to recover the lost hydrocarbons by "backflowing" the well for almost two years.

Forty years later and a half mile to the southeast, a water well was drilled for the Three Lakes subdivision. When the well was first tested for organic chemical contaminants in 1990 (after about 10 years of use), it was discovered to contain benzene. The subdivision's water supply was shifted to an uncontaminated source shortly thereafter.

In 1993, several hundred residents of Three Lakes sued Exxon Corporation, alleging the oilfield leak more than 50 years before involving its predecessor contaminated the water well and caused them various health problems. Six residents **[**2]** were selected for a bellwether trial, which took place over the better part of six weeks.

At the conclusion, the jury found Exxon negligent and grossly negligent, and awarded a total of almost $ 7 million in actual and punitive damages. In post-judgment proceedings, the trial court reduced or eliminated most of the jury awards, rendering take-nothing judgments against the four adults and reduced judgments for the two minors.

All parties appeal. Exxon contends there is no evidence its negligence caused either the contamination of the water well or the plaintiffs' specific diseases. The plaintiffs contend the trial court erred in disregarding the jury's awards. Both are governed by the same standard--whether any evidence supports the jury's verdict. [1] **[*180]** Because legal standards for reviewing medical causation are much clearer than those for underground hydrology, we address it first. Finding it dispositive, we go no further.

[3] I. What We Review**

Exxon challenges the opinions of the plaintiffs' four medical experts, arguing they presented no scientific basis for concluding exposure to the water at Three Lakes caused the plaintiffs' diseases. ***HN1*** We consider all the evidence in the light most favorable to the verdict, and indulge every reasonable inference in that direction. [2] But we do not take expert testimony at face value; if it is unreliable, it constitutes no evidence, and we must reverse. [3]

We disagree with the plaintiffs that two different approaches might apply--one based on the six factors applied in *Merrell Dow Pharmaceuticals, Inc. v. Havner*, [4] and one that looks only for "analytical gaps" in the testimony. [5] Undoubtedly, the tools used to test the reliability of expert testimony **[**4]** will vary depending on the field of expertise involved. But it is impossible to ignore the *Havner* factors here, as the field of expertise is the same--the epidemiological evidence connecting a chemical exposure and a disease. [6]

We also disagree with our dissenting colleague that Exxon waived error by failing to obtain a record from a

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[1] *See* ***Merrell Dow Pharms., Inc. v. Havner, 953 S.W.2d 706, 711, 40 Tex. Sup. Ct. J. 846 (Tex. 1997)*** (holding judgment in accordance with jury verdict improper if no scientifically reliable evidence supports it); *Brown v. Bank of Galveston, N. A., 963 S.W.2d 511, 513, 41 Tex. Sup. Ct. J. 437 (Tex. 1998)* (holding judgment notwithstanding jury verdict proper only if no evidence supports it).

[2] *See* ***Havner, 953 S.W.2d at 711***; *see also Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 595, 113 S. Ct. 2786, 2798, 125 L. Ed. 2d 469 (1993)*.

[3] *See* ***Havner, 953 S.W.2d at 714***.

[4] *Id.*

[5] *See Gammill v. Jack Williams Chevrolet, Inc., 972 S.W.2d 713, 727, 41 Tex. Sup. Ct. J. 1117 (Tex. 1998)*.

[6] *See Daubert, 509 U.S. at 591-94, 113 S. Ct. at 2795-97*; ***Havner, 953 S.W.2d at 711-14***.

pretrial hearing at which its motions to exclude allegedly unreliable expert testimony were first considered. Following this argument to its logical conclusion, every time a pretrial motion to strike expert testimony is denied without a reporter's record, we must presume *any* jury verdict thereafter is valid (no matter how scientifically unsound). This argument is neither raised nor briefed by the parties, apparently for the same reason **[**5]** they never requested that the hearing be recorded--because no testimony was taken at the pretrial hearing. Not a single line in any party's brief suggests we should look to the pretrial hearing for evidence of reliability, or that it included anything other than what was repeated a few days later at trial.

While this appears to be an issue of first impression, the Supreme Court has given us some guidance. First, it was the plaintiffs' burden to present scientifically reliable evidence of causation at trial. [7] **[**6]** Second, Exxon was required to object at trial (which it did repeatedly) [8] so the **[*181]** plaintiffs would have an opportunity to cure any defects regarding reliability and present us with a fully developed record. [9] Neither of these guidelines suggests a rule that, after its objections were overruled, it remained *Exxon*'s duty to incorporate into the trial record any and all pretrial evidence that supported the reliability of the *plaintiffs*' experts. [10]

It is ***HN2*** generally true that unless an appellant files a complete reporter's record (or a limited appeal [11] **[**7]**), we presume the omitted portions are relevant and support the jury's verdict. [12] But a complete record does not include matters from other proceedings; we normally test the legal sufficiency of a jury verdict by the evidence at the jury trial, not by what happened before or after it. [13] **[**8]** Moreover, there is an important difference between presuming and pretending. Here, the trial record makes clear that no evidence was presented at the pretrial hearing. [14] And if (as discussed below) the evidence at trial showed that scientific evidence could not support a particular verdict, any presumption that science held the opposite view a few days earlier has been effectively rebutted. [15]

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[7] *See* ***Havner, 953 S.W.2d at 720***; *E.I. du Pont de Nemours and Co. v. Robinson, 923 S.W.2d 549, 557, 38 Tex. Sup. Ct. J. 852 (Tex. 1995)*.

[8] *See* *Maritime Overseas Corp. v. Ellis, 971 S.W.2d 402, 409, 41 Tex. Sup. Ct. J. 683 (Tex. 1998)*. Shortly before trial, Exxon filed a motion in limine requesting exclusion of several of the plaintiffs' experts, including 60 pages of briefing, a 28-page appendix applying the brief to each plaintiff, 127 pages of deposition excerpts, and 55 pages of medical studies. Immediately before Dr. Goldstein and Dr. Shalat took the stand at trial, Exxon moved to exclude their testimony, and immediately after they finished moved to strike their testimony, each time requesting and the trial court allowing the motion in limine to be incorporated by reference in lieu of an extended oral objection.

[9] *See* *Maritime Overseas, 971 S.W.2d at 412*.

[10] We also disagree that this necessarily requires repetition of pretrial evidence before the jury. Either party at trial may incorporate by reference any proof from the pretrial hearing they wish made part of the trial record. Here, neither did.

[11] *See* *TEX. R. APP. P. 53(d)*.

[12] *See* *Feldman v. Marks, 960 S.W.2d 613, 614, 40 Tex. Sup. Ct. J. 191 (Tex. 1996)*.

[13] As neither party relies on any evidence from the pretrial hearing, we need not decide whether a legal sufficiency review should include evidence of scientific reliability that is never presented to jurors. *See* *Campbell v. State, 85 S.W.3d 176, 184, 45 Tex. Sup. Ct. J. 1251 (Tex. 2002)* (refusing to review issue of legal sufficiency without adequate briefing and argument); *see also* Harvey Brown, *Procedural Issues Under Daubert*, *36 HOUS. L. REV. 1133, 1139 (1999)* (suggesting parties "presumably" need not re-offer evidence from pretrial hearing before jury, and that evidence from pretrial hearing will be considered "indirectly" in reviewing sufficiency of the evidence).

[14] At trial, Exxon's counsel introduced himself to each expert by noting previous depositions or hearings at which they had crossed swords, but no mention is made of a pretrial hearing a few days before trial. Each expert was examined at length about his deposition testimony, but none about testimony from any pretrial hearing. On the critical connection between benzene and leukemia, Dr. Bernard Goldberg admitted he provided neither animal studies nor epidemiological articles to Exxon's counsel at any time between his deposition and trial. Finally, the very capable attorneys and experienced trial judge all certainly knew when a record is required and when it is not.

[15] The presumption that omitted portions of a record support a verdict is rebuttable. *See* *Polanco v. Pan Amer. Univ., 818 S.W.2d 97, 99 (Tex. App.--Corpus Christi 1991, no writ)*; *Candelier v. Ringstaff, 786 S.W.2d 41, 44 (Tex. App.--Beaumont 1990, writ denied)*; *see also* *Garza v. Texas Alcoholic Beverage Comm'n, 83 S.W.3d 161, 166 (Tex. App.--El Paso 2000)*,(applying same rule to presumption in favor of judgments generally), *aff'd, 89 S.W.3d 1, 45 Tex. Sup. Ct. J. 1014 (Tex. 2002)* *cf.* *Vickery v. Comm'n for Lawyer Discipline, 5 S.W.3d 241, 252, 256 (Tex. App.--Houston [14th Dist.] 1999,*

[9]** Finally, our colleague's reliance on a treatise discussing the admissibility of expert testimony [16] shows he misconstrues **[*182]** Exxon's point. Challenges to both the admissibility and the legal sufficiency of expert testimony involve the same substantive guidelines for determining relevance and reliability. [17] **[**10]** But admissibility of expert testimony is an initial decision made by the trial judge, usually outside the jury's presence, and is subject to an abuse-of-discretion review. [18] By contrast, legal sufficiency of expert testimony tests the jury's decision after the trial, looking at the whole trial record to see if any evidence supports the verdict. [19] Had Exxon complained of the pretrial ruling on admissibility, we would need a record of that hearing to review it. But Exxon does not. It is not our place to change this legal sufficiency point into something else, or dismiss it by reviewing a different decision by a different decision-maker in a different proceeding according to a different standard of review.

II. Benzene and ALL

James Makofski, Jr., was an infant when his family moved to Three Lakes in 1985. In September 1991, he was diagnosed with acute lymphocytic leukemia (ALL). [20] Treatment of ALL is expensive and painful; in James's case, it included three years of repeated rounds of chemotherapy and spinal injections. But the trial testimony also indicated current treatment is usually successful; in James's case, annual checkups since 1994 have shown no indications of recurrence.

The plaintiffs alleged James's ALL was a result of his exposure to benzene in the Three Lakes water supply. It was undisputed that current scientific knowledge cannot prove what causes ALL in any particular instance, and that in 95 percent of ALL cases the cause is never **[**11]** known. Because of so many uncertainties, efforts to establish liability for ALL based on exposure to hazardous substances have proved daunting. [21] Here, the plaintiffs' attorneys used epidemiological studies, a government study, and expert testimony to try to raise a fact question on causation.

The jury found Exxon's negligence caused James's injuries, and **[**12]** awarded him $ 1.5 million for past medical care, $ 1 million for future medical care, $ 400,000 for pain and anguish, and $ 325,000 for impairment. After reducing the award for future medical expenses to $ 156,603 (the only estimate of costs presented at trial), the trial court entered judgment in accordance with these awards. Exxon challenges all awards for lack of causation; the plaintiffs challenge the trial court's reduction of the future medical award.

The Epidemiological Studies

In *Havner*, the Texas Supreme Court held that ***HN3*** scientifically reliable epidemiological studies showing more than a doubling of the risk may establish a causation **[*183]** link. [22] To benefit from this exception to the normal rules requiring individual proof of causation, a claimant must show a similar exposure to the subjects studied and exclude other plausible causes with reasonable certainty. [23]

Benzene has been known to be potentially harmful to humans **[**13]** for more than a century. Thus, a large number of epidemiological studies have been conducted on its effects. The parties' experts agreed that benzene has been shown to cause acute myelogenous leukemia

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pet. denied) (holding denial of request for negative finding of fact contrary to court's judgment did not rebut presumption of validity of trial court's verdict). Thus, for example, Dr. Michael Gray's trial testimony that there were no tests in John Russell's medical records excluding iron-deficiency anemia (a form not associated with benzene) rebuts any presumption that the pretrial hearing included such evidence from the medical records.

[16] Michol O'Connor, O'CONNOR'S TEXAS RULES: CIVIL TRIALS 289, § 3.5 (2002).]

[17] *See* ***Havner, 953 S.W.2d at 712***.

[18] *See* *Robinson, 923 S.W.2d at 558*.

[19] *See* ***Havner, 953 S.W.2d at 720***.

[20] Sometimes referred to as acute lymphoblastic leukemia.

[21] *See* *In re TMI Litigation, 193 F.3d 613 (3rd Cir. 1999)* (affirming summary judgment striking expert testimony on *Daubert* grounds that attempted to link ALL to radiation exposure from Three Mile Island incident); *Whiting v. Boston Edison Co., 891 F. Supp. 12 (D. Mass. 1995)* (granting motion to strike expert testimony on *Daubert* grounds that attempted to link ALL to exposure to ionizing radiation); *see also* JONATHAN HARR, A CIVIL ACTION (Random House 1995) (studying trial involving six cases of ALL allegedly caused by underground leakage of trichloroethylene into community water well in Woburn, Massachusetts).

[22] ***953 S.W.2d at 718***.

[23] ***Id. at 720***.

(AML), the most common form of leukemia found in adults. But the same studies have not reached the same conclusion regarding ALL, the most common form found in children.

Unfortunately, almost none of the relevant epidemiological studies appear in the trial court record, though several were marked for identification and discussed at length during the trial. As learned treatises, excerpts from these studies could be read to jurors, but none were admitted as exhibits for jurors' independent review. [24] But while the rules of evidence withhold learned treatises from jurors, that does not mean they should be withheld entirely from the record. Without them, we are hard-pressed to conduct the kind of review *Havner* requires.

Each party here says the other had the responsibility to **[**14]** place relevant studies in the record. A similar disagreement appears to exist among Texas appellate courts: the Sixth Court of Appeals has held studies cannot be considered on appeal unless they are "admitted into evidence," [25] but the Fourth Court of Appeals has relied on studies attached to an appellate brief. [26]

In *Havner*, the Court discussed studies included in the record as well as studies that were only referred to in testimony. The Court found legally insufficient any studies as to which there was no information in the record (either from testimony or the study itself) establishing confidence levels and intervals. [27] This example suggests testimony from a study may alone be enough, but it must be quite detailed.

[15]** Because of the uncertainty as to what sources we can review, we asked each party (over Exxon's objection) to submit an appendix with copies of the studies on which they rely. Having reviewed them all, we find that even under the more lenient approach (allowing these studies to be supplemented on appeal) the evidence is legally insufficient under the *Havner* standards:

1. *The Chinese Studies*. [28] **[**16]** This series of studies included more than 100,000 workers, the majority of whom had been exposed to benzene in factories in China. For ALL, the study found a relative risk of 2.8 with a confidence interval of 0.5 to **[*184]** 54.5 at a 95% confidence level. As this interval includes 1.0, the finding was not statistically significant (that is, it was inconclusive). [29] The authors concluded that risks were "markedly increased" for ALL, but that "the excess risk for this condition was not statistically significant." [30]

2. *The US/UK Study*. [31] This meta-analysis of more than 200,000 petroleum workers in the United States and United Kingdom found a relative risk for ALL of 1.32 with a confidence interval of 0.81 to 2.01 at a 95% confidence level. As this interval again includes 1.0, the finding was not statistically significant. The authors concluded that no increased risk for ALL or several other specific types of leukemia had been shown among petroleum workers in the two countries. [32]

3. *The Port Arthur Study*. [33] This study looked at the causes of death among 18,000 workers at a refinery in Port Arthur, Texas between **[**17]** 1937 and 1978. For ALL, the study found a relative risk of 2.6 with a confidence interval of 1.1 to 5.1 at a 95% confidence level. [34] But the authors concluded the ALL finding was

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[24] *See* ***TEX. R. EVID. 803(18)***.

[25] *See* Minn. Mining and Mfg. Co. v. Atterbury, 978 S.W.2d 183, 198 (Tex. App.--Texarkana 1998, pet. denied).

[26] *See* Texas Workers'Comp. Ins. Fund v. Lopez, 21 S.W.3d 358, 364-65 (Tex. App.--San Antonio 2000, pet. denied).

[27] *See* ***Havner, 953 S.W.2d at 725-26***.

[28] Song-Nian Yin, et al., *A Cohort Study of Cancer Among Benzene-exposed Workers in China: Overall Results*, 29 AM. J. INDUS. MED. 227 (1996); Song-Nian Yin, et al., *An Expanded Cohort Study of Cancer Among Benzene-exposed Workers in China*, 104 ENVTL. HEALTH PERSP. 1339 (1996); Song-Nian Yin, et al., *Leukaemia in Benzene Workers: a Retrospective Cohort Study*, 44 BRIT. J. INDUS. MED. 124 (1987).

[29] *See* ***Havner, 953 S.W.2d at 723***.

[30] Yin, *Overall Results*, 29 AM. J. INDUS. MED. at 232, 233.

[31] Gerhard K. Raabe and Otto Wong, *Leukemia Mortality by Cell Type in Petroleum Workers with Potential Exposure to Benzene*, 104 ENVTL. HEALTH PERSP. 1381 (1996).

[32] *Id.* at 1389.

[33] K.P. Satin, et al., *A 50-year Mortality Follow-up of a Large Cohort of Oil Refinery Workers in Texas*, 38 J. OCCUP. ENVTL. MED. 492 (1996).

[34] For ease of comparison to the *Havner* standards, these figures have been converted from the standardized mortality ratios used in the article, which are based on a relative risk of

spurious because of historical difficulties in distinguishing it from other leukemias:

> From a diagnostic perspective, it might have been difficult historically to distinguish between patients with CLL [chronic lymphocytic leukemia] and those with ALL. This difficulty would likely have prevailed during a large portion of the cohort follow-up period. . . . Indeed, if even one ALL case was the result of misdiagnosis, the ALL [finding] would not have been statistically significant. In this regard, it is noteworthy that one of the ALL death certificates listed the cause of death as "Alymphatic [sic] leukemia". As this is not a generally recognized diagnosis, we could not determine the cell type of this cancer. Nevertheless, we coded it as acute lymphocytic leukemia in our analysis and as such, the statistical significance of the ALL result rests on a questionable diagnosis. . . . No epidemiologic study has demonstrated an association between exposure to benzene and acute lymphocytic leukemia. Similarly, **[**18]** no other petroleum refinery study has reported an increase of ALL. . . . Thus, the finding from the Port Arthur refinery was inconsistent with other studies of refinery workers with similar exposures. The likely spurious nature of the ALL finding in the Port Arthur cohort is further supported by the lack of an exposure-response relationship based on length-of-employment analysis. [35]

4. *Other Studies Submitted*. Several other studies were submitted that contained no statistical information on any association between benzene and ALL. For example, one study found a significant association between ALL *and other* **[**19]** *lymphatic leukemias* with exposure to benzene *and other solvents*, but because of the **[*185]** confounding chemicals and diseases the study tells us nothing definitive about benzene and ALL. [36] Another article stated it would be "surprising" if benzene caused only AML, but limitations in the literature precluded any more definitive conclusion. [37]

5. *Other Studies Mentioned*. The various experts briefly mentioned several other studies, but only in passing. For example, some testified that an author or a study "says benzene causes ALL" or "supports my opinion." But none of these studies have been supplied to us (even after our specific request), and nothing gives us any indication of the scope, design, **[**20]** relative risk, confidence interval, confidence level, or even whether benzene or ALL were actually involved. Following *Havner*'s example, we cannot grant even a scintilla of weight to these passing references. [38]

The Three Lakes Registry

In addition to general epidemiological studies, the plaintiffs rely on a study by the Agency for Toxic Substances and Disease Registry (ATSDR), a division of the federal Department of Health and Human Services that gathers health information on persons exposed to hazardous substances. In 1989, the agency selected benzene to study because of its danger to humans, its ubiquity in the environment (from work sites, waste dumps, gasoline, automobile exhaust, tobacco products, and foods), and the lack of scientific information on the effect of low-level, long-term exposure.

In 1990, ATSDR chose to study the Three Lakes subdivision shortly after the contamination of the water supply was discovered and discontinued. **[**21]** Interviews were conducted in person and by telephone with about 1100 residents, with follow-up interviews in subsequent years. The data was collected in a "Benzene Subregistry" report, and in 1998 two of the primary investigators published a peer-reviewed study of the findings. [39]

In both, statistically significant increases at a 99% confidence level were reported (at least for some age groups in some years) for anemia, ulcers, gall bladder trouble, stomach or intestinal problems, stroke, urinary tract disorders, skin rashes, diabetes, kidney diseases, and respiratory allergies. By contrast, statistically significant *decreases* were found at the same

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100.0 rather than 1.0.

[35] Satin, *supra*, at 503.

[36] Anthony J. McMichael, et al., *Solvent Exposure and Leukemia among Rubber Workers: An Epidemiologic Study*, 17 J. OCCUP. MED. 234 (1975).

[37] David A. Savitz and Kurtis W. Andrews, *Review of Epidemiologic Evidence on Benzene and Lymphatic and Hematopoietic Cancers*, 31 AM. J. INDUS. MED. 287 (1997).

[38] *See* ***Havner, 953 S.W.2d at 725-26***.

[39] Jeanne R. Burg and Ginger L. Gist, *The National Exposure Registry: Analyses of Health Outcomes From the Benzene Subregistry*, 14 TOXICOLOGY & INDUS. HEALTH 367 (1998).

confidence level for asthma, emphysema, arthritis, rheumatism, and hearing and speech impairments. No statistically significant differences were found for liver disease, mental retardation, **[**22]** or cancer. There was no finding whatsoever regarding ALL.

For several reasons, the ATSDR findings are insufficient to establish causation under the *Havner* standards. First and foremost, that is because the report itself says they cannot:

> The findings in this report cannot be used to identify a causal relationship between the health outcomes and benzene exposure. In addition, there are some methodological differences in data collection that may have biased the reporting **[*186]** rates, resulting in false positive findings. The findings of this report do, however, reinforce the need to continue regular followup of this population.

Given this conclusion, the plaintiffs cannot use the subregistry data to establish causation. *Havner* does not allow us to give any weight to in-court conclusions about a study that disagree so diametrically with the published conclusions of the researchers who conducted it. [40]

[23]** Second, the ATSDR's reference to potential bias recognizes the difficulty in gathering accurate data when many of the respondents are parties in this litigation. Experts for all parties agreed that those involved in litigation are likely to report higher levels of medical problems. The ATSDR researchers attempted to mitigate this problem by asking residents not whether they had a particular health condition, but whether a physician had told them they had it. What is missing from the plaintiffs' efforts to use the ATSDR data is any scientific evidence of whether that mitigation was too little or too much.

Third, the ATSDR also noted another potential source for false positives--the large sample size and number of comparisons in the study. This comment apparently refers to the unfortunately-named "Texas Sharpshooter Fallacy," in which natives of this state are alleged to shoot at the side of a barn and then draw a target where the most holes are located, thereby establishing the accuracy of their marksmanship. [41] Epidemiologists use the term to identify the phenomenon that when a large number of health effects are surveyed, there is an increased likelihood that random chance will **[**24]** produce a statistically significant association when in fact none exists. [42]

Fourth, although the authors concluded the Three Lakes data could identify potential associations, [43] that does not justify making causation conclusions from it. The ATSDR's express purpose for studying Three Lakes was the lack of epidemiological information on the health effects of long-term exposure to low levels of benzene. As *Havner* notes, ***HN4*** even statistically significant associations in an isolated study are no evidence of causation, as scientific methodology requires some confirmation. [44]

[25]** Finally, the ATSDR data is too general to support the kind of specific uses the plaintiffs try to make of it. In their brief, the plaintiffs make the rather shocking assertion that Exxon did not dispute general causation, despite days of cross-examination and counter witnesses called entirely for that purpose. Apparently, this is a reference to Exxon's concession that benzene is associated with one type of leukemia (AML), but Exxon never conceded the same as to ALL. While lumping distinct diseases together as "leukemia" may yield a statistical increase as to the whole category, it does so only by ignoring proof that some types of the disease have a much greater association with benzene than others. The ATSDR made no attempt to distinguish among many particular types of diseases with apparently **[*187]** different etiologies. The categories of diseases the ATSDR uses--such as "anemia or other blood disorders," "skin rashes, eczema, and other skin allergies," or "cancers"--are simply too general to meet Havner's standards.

The Experts

Finally, the plaintiffs also presented two experts to establish a causal connection between benzene and

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[40] ***953 S.W.2d at 729-30*** (holding expert's conclusion that substance caused birth defects, based on report in which researchers said it was only potentially capable of doing so, was not evidence of causation).

[41] *See* Boughton v. Cotter Corp., 65 F.3d 823, 835 n.20 (10th Cir. 1995); Robert F. Blomquist, *Bottomless Pit: Toxic Trials, The American Legal Profession, and Popular Perceptions of the Law*, 81 CORNELL L. REV. 953, 960 n.41 (1996) (book review).

[42] *Id.*

[43] Burg and Gist, *supra,* at 383.

[44] *See* ***Havner, 953 S.W.2d at 727***.

ALL: Dr. Bernard Goldstein, a physician board-certified **[**26]** in internal medicine, hematology, and toxicology, and Dr. Stuart Shalat, a doctor of epidemiology. Together, their testimony illustrates most of the practices *Havner* declares to be inconsistent with sound methodology among epidemiologists.

At trial, both experts testified that benzene causes ALL, despite the many published, peer-reviewed epidemiological studies finding no statistically significant relationship. Neither, however, appears to have ever offered the same opinion in an established scientific journal. In his own textbook, Dr. Goldstein listed the association between benzene and ALL as "suggested but unproven" in 1983, as "suggested" in 1986, and in 1993 as a "biomedical plausibility." [45] ***HN5*** Plausibility is not enough. [46] **[**27]** *Havner* instructs us to be especially skeptical of scientific evidence that has not been published or subjected to peer review. [47]

Dr. Goldstein explained his divergence from the published literature on his belief that a lower confidence level should be used in court. Although he admitted causation "from a scientifically proven point of view" requires 95 percent certainty, he imposed only a 51 percent certainty when testifying in court. *Havner* expressly rejects that argument:

> The generally accepted significance level or confidence level in epidemiological studies is 95% . . . Virtually all the published, peer-reviewed studies on Bendectin have a confidence level of at least 95%. . . . We think it unwise to depart from the methodology that is at present generally accepted among epidemiologists. [48]

Dr. Goldstein justified his departure from current epidemiological standards by pointing to lower standards used by OSHA, the EPA, or physicians who treat patients:

> [Plaintiffs' **[**28]** counsel]: If you wait till you have this 10-to-1 exactitude that [Exxon is] urging, what's going to really happen in this world?
>
> [Dr. Goldstein]: There will be a lot of sick people . . . I just wouldn't be practicing good medicine or public health if I waited till I was absolutely certain. . . . I can't wait as a physician until I'm 95 percent sure of something before I can deal with the patient's potential problems.

Again, the *Havner* Court expressly distinguished between Type I (false positive) and Type II (false negative) statistical errors when deciding what confidence level is appropriate. [49] **[**29]** As noted in the examples given in *Havner*, differences in costs and benefits make false positives acceptable in some situations but unacceptable in others. [50] **[*188]** For example, it may be appropriate for the EPA to protect people from chemical exposure on weak evidence that it will cause any harm, but that does not make it equally appropriate to impose a judgment of several million dollars on weak evidence that a defendant caused any harm. *Havner* specifically bars this effort to lower epidemiological confidence levels for courtroom use. [51]

Additionally, Dr. Goldstein suggested causation conclusions regarding AML should lead to the same conclusions regarding ALL, as the diseases have "similar characteristics." But he admitted all epidemiological studies in the last twenty years invariably treat these malignancies separately, and every study filed with us shows significantly different findings as to each. We cannot treat an epidemiological study regarding one disease as if it applied to another. [52]

Finally, Dr. Shalat reinterpreted the ATSDR's inconclusive finding regarding cancer into a statistically significant one by adding to the study--which specifically did not study any deaths **[**30]** in the Three Lakes subdivision--statistics for the general public regarding deaths from cancer. *Havner* expressly prohibits reanalysis of a study to derive a significant finding if sound scientific methodology would not draw the same

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[45] Dr. Goldstein testified he was upgrading this designation to "probable" in an edition not yet published, but did not indicate what (if any) peer-review was involved in the publication.

[46] *See* ***Havner, 953 S.W.2d at 729***.

[47] ***Id. at 726-27***.

[48] ***Id.at 723-24***.

[49] ***Id. at 722-23***.

[50] *Id.*

[51] ***Id. at 722-24***.

[52] ***Id. at 725*** (holding published studies showing statistically significant results regarding birth defects *other than* limb reduction defects could not support a finding regarding limb reduction defects).

inference. [53] Even if the incidence of all types of cancer was relevant (which it is not for the reasons stated above), there is no evidence that Dr. Shalat's reconfiguration to reach a conclusion that the authors did not is scientifically sound.

Conclusion

In sum, the plaintiffs presented evidence that several experts believe a causal connection exists between benzene and ALL, while others do not. But an expert's belief that a substance might cause a disease is no evidence that in reasonable probability it did. [54] No epidemiological study establishes a statistically significant doubling of the risk of ALL from exposure to benzene; accordingly there was no evidence that--more probably than not--James's ALL was caused by exposure **[**31]** to benzene in the Three Lakes water supply. We hold the evidence is legally insufficient to support James Makofski's damage awards.

III. Benzene and Other Diseases

The only other plaintiff who obtained judgment against Exxon was John Russell. Born in November 1990, he was found to be anemic in a blood test taken five months after birth. Subsequent blood tests were occasionally "borderline," but there has been no diagnosis of anemia since his early infancy. His parents testified he has suffered from recurrent nosebleeds, asthma, and skin rashes.

The jurors found John had suffered "$ 0" for all damages alleged in the past, but awarded $ 200,000 for future pain and mental anguish, $ 100,000 for future impairment, and $ 176,000 for future medical care. Exxon asserts there is no evidence John's exposure to benzene caused any of his ailments, or that this exposure more than a decade ago will in reasonable probability result in any future damages.

[*189] As with leukemia, experts **[**32]** for both parties agreed that some types of anemia have been shown to be associated with benzene exposure and other types have not. Dr. Michael Gray, an internist board certified in occupational medicine who testified for the plaintiffs, said he believed John's anemia was attributable to benzene, but admitted the medical records contained no studies excluding iron-deficiency anemia--the most common form, and one not associated with benzene. As John has not been diagnosed with anemia since then, there has been nothing to support this conclusion thereafter. Without establishing the type of John's anemia, Dr. Gray did not exclude other plausible causes of it with reasonable certainty. [55]

Nor was there any other reliable scientific evidence connecting benzene to any of John's other complaints. Dr. Gray admitted asthma was not caused by benzene (and as noted above, the ATSDR reported a statistically significant *decrease* in asthma at Three Lakes). He also testified benzene had suppressed **[**33]** John's immune system, but offered no epidemiological studies or other scientific evidence connecting benzene exposure at levels John experienced with an appearance of nosebleeds, asthma, and skin rashes more than a decade later (as would be necessary to support the jurors' awards of future damages only). Although nosebleeds, respiratory infections, and skin rashes have many causes, there is nothing in the trial record to exclude those alternate explanations but Dr. Gray's naked assurance.

Finally, none of this evidence explains why the jury awarded nothing to John for past damages but a substantial amount for damages in the future. Clearly, the award was based on no disease he has exhibited to date. Instead, throughout the trial the plaintiffs' counsel pointed to symptoms John had rather than diseases, and argued these symptoms were similar to those that preceded James Makofski's ALL diagnosis. His entire closing argument for John's damages was an attempt to connect the two boys' ailments:

> You look at John Russell. . . . What sum of money for John Russell? He's eight years old. He's at the age that James was. He's got the same nosebleeds. He gets told about the same flus. He's **[**34]** also got an asthma problem, not related in the sense that the asthma is caused by the benzene, but it makes every cold he has worse for the asthma. He's got the anemia. as Dr. Gray told you, you know, this is a boy - you might check his anemia one day and it may be okay. Other days it's not. . . . You won't find many eight year olds that sit that still. That's not just well-mannered. That's a boy who is a little different because his body does not

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[53] ***Id. at 720, 727***.

[54] ***Id. at 729***.

[55] ***Id. at 720***.

> have the energy and because he's got some problems and Dr. Gray's testified to them. At this point is it leukemia? No.

Jurors obviously followed the unstated conclusion ("but he might get it in the future") when they awarded no past damages but substantial future ones.

But not a single expert at trial supported this analogy. All agreed John did not have ALL, and none could say he probably ever would. His testifying expert admitted that no one could state with reasonable medical certainty that John would develop any form of cancer in the future, much less ALL. Moreover, as Exxon points out, the analogy with Makofski was misleading, as there was no evidence the latter had anemia or nosebleeds for several years before his ALL diagnosis. **[**35]** To the contrary, the only testimony at trial was that Makofski suffered nosebleeds and **[*190]** anemia immediately before his ALL diagnosis, due to the massive destruction of bone marrow cells that the disease engenders.

HN6 Texas law prohibits recovery for future diseases unless there is a reasonable medical probability the disease will occur. [56] It also prohibits recovery of mental anguish damages for an increased risk of developing a disease that is not presently manifest. [57] We find there was no legally sufficient evidence to support a causation connection between benzene exposure and any disease John Russell in reasonable probability will suffer in the future.

IV. Benzene and Mental Anguish

The remaining four adult plaintiffs asserted a wide range of medical problems continuing up to the time of trial, though **[**36]** by that time none of them had lived in Three Lakes for several years, or been exposed to benzene in the subdivision's water supply for a decade. Andrea Russell (John's mother) presented evidence that she suffers from anemia and keratoses (benign precancerous skin lesions). Phillip Devora complained of skin rashes, acne, and fungal infections on his fingernails. His wife Janie sought damages for anemia, benign fibroid growths in her uterus, and excessive menstrual bleeding (which led to her decision to undergo a hysterectomy). Codi Stennett presented evidence she suffers from skin rashes, leukoplakia (depigmentation of the skin), fungal infections, bronchial infections, and anemia. Several of these plaintiffs attributed some or all of their complaints to "immune suppression" caused by exposure to benzene.

Jurors apparently attributed almost none of these complaints to the water at Three Lakes, awarding "$ 0" as to every claim for damages except mental anguish (which they awarded in amounts ranging from $ 50,000 to $ 100,000). The plaintiffs do not challenge the jury's verdict that they have suffered nothing but mental anguish. But they do challenge the trial court's order setting aside **[**37]** the mental anguish awards.

Dr. John Wilson, an expert in post-traumatic stress syndrome ("PTSD"), admitted that while none of the four adults would meet current medical standards for that diagnosis, they nevertheless showed some or all of its symptoms. The plaintiffs argue the verdict could not have been based merely on their fear of contracting future diseases, as the trial court excluded such evidence. While it is true the trial court made that order (over the plaintiffs' repeated objections), the record shows the evidence from the plaintiffs' testifying psychologist was nothing but:

> [As to Janie Devora]: She began to have worries about her family. She had worries about was she going to get a blood disorder. She began to have sleep disturbance. She began to express more stress and anxiety reactions. She began to have concerns learning that other people in the community had cancer.
>
> [As to Phillip Devora]: He was a little bit what I would term guarded in his presentation; but underneath that, he also expressed, again, specifically, fears and anxieties and apprehensions about what was happening to him, what was happening to his wife and his family. . . . But his anxiety **[**38]** was apparent.
>
> [As to Codi Stennett]: I think that the most succinct way I can put it is that she carries around this anxiety that **[*191]** she knows she's been exposed to the benzene, that it's had an effect on her, that it affects her cells and that she's going to carry that with her.
>
> [As to Andrea Russell]: She has anxiety. She has depression. She's traumatized by this experience,

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[56] *See* *Pustejovsky v. Rapid-American Corp., 35 S.W.3d 643, 652, 44 Tex. Sup. Ct. J. 89 (Tex. 2000)*.

[57] *See* *Temple-Inland Forest Prods. Corp. v. Carter, 993 S.W.2d 88, 93, 42 Tex. Sup. Ct. J. 592 (Tex. 1999)*.

> and she has current concerns about her physical health and where that's going to go starting now and in--from there on.

He agreed with the plaintiffs' counsel that each of the plaintiffs suffered mental anguish because "they've been poisoned," and while he admitted their experiences fell short of accepted PTSD causes such as combat or concentration camps, there was a "possible parallel" with victims of the latter because the plaintiffs here had been "gassed and survived."

Clearly, there was substantial evidence the plaintiffs were anguished about their exposure to benzene in the Three Lakes water supply. But all of that evidence related to their fears about what it might mean for their health. Adopting the vivid metaphor used by plaintiffs' counsel, people suffer mental anguish from drinking poison **[**39]** not because it tastes bad, but because they fear what it will do to them. The jury found these plaintiffs suffered no illness from their exposure to benzene at Three Lakes in the ten years since it stopped, or in reasonable probability will do so in the future. At this point so long after their exposure, it is clear that their anguish is less related to the water than to what they have been told about it.

Because Texas law does not permit recovery of mental anguish damages for fears related to developing a disease that has not occurred and has not been shown to be likely, [58] we hold the trial court did not err in disregarding the plaintiffs' mental anguish damage awards. [59]

[40] Conclusion**

Someday, medical science may find that benzene causes ALL; but on the record before us it is just as likely to find that it does not. Some of the other ailments the plaintiffs have suffered may also be connected to their exposure to benzene; but on the record before us we simply cannot tell. We cannot rush to impose liability when scientifically reliable evidence is unavailable. [60]

Accordingly, we reverse the judgment of the trial court, and render judgment that the plaintiffs take nothing.

Scott Brister

Chief Justice

Dissent by: Charles W. Seymore

Dissent

DISSENTING OPINION

The majority erroneously parses the appellate record and fashions a result by reducing the gatekeeper's *Robinson* hearing to a nullity. My colleagues have decided to treat reliability as an evidentiary jury issue; moreover, they misapply appellate rules and case precedent. I dissent.

THE ISSUE IS RELIABILITY AND THE GATEKEEPER IS ESSENTIAL

The issue **[**41]** on appeal is reliability: Exxon contends that plaintiffs' experts' opinions [1] **[*192]** "are not evidence because they are unreliable and founded on unproven assumptions." The majority reviews the reporter's record from trial and scientific studies that are not included in this appellate record and concludes the plaintiffs presented no evidence of reliability before the jury and thus no evidence of medical causation. There are two glaring errors in the majority's approach. First, they simply ignore the evidentiary *Robinson* hearing held by the trial court, disregarding it as though it is a nullity. Second, the majority confuses the jury's role, mistaking reliability as an element to be proved before

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[58] *See* Carter, 993 S.W.2d at 93.

[59] Jurors also awarded each of the six plaintiffs $ 500,000 in punitive damages. As we have found there is no evidence supporting any of the plaintiffs' actual damage awards, we also set aside the awards of punitive damages. *See* Twin City Fire Ins. Co. v. Davis, 904 S.W.2d 663, 665, 38 Tex. Sup. Ct. J. 1008 (Tex. 1995).

[60] *See* ***Havner, 953 S.W.2d at 728***.

[1] Exxon challenges the contamination causation testimony presented by Professor Patrick Agostino (a geologist), Dr. Joseph Hughes (a professor of environmental science and engineering), Dr. Phillip Gschwend (a chemical oceanographer), Dr. Dennis McLaughlin (a hydrologist), and Dr. Jack Matson (an environmental engineer). Further, Exxon challenges the medical causation testimony provided by Dr. Marvin Legator (a toxicologist), Dr. Bernard Goldstein (a toxicologist and hematologist), Dr. Stuart Lloyd Shalat (an epidemiologist), and Dr. Michael Gray (a medical doctor).

the jury.

[42] 1. Trial Court Determines Reliability, Preferably Pretrial**

Because the issue is reliability, it is imperative that we review both the trial record and the pretrial *Robinson* hearing. TEX. R. APP. P. 34.1. The trial court has the heightened responsibility to act as a gatekeeper in a *Robinson* hearing to screen out unreliable expert evidence. Gen. Motors Corp. v. Sanchez, 997 S.W.2d 584, 590, 42 Tex. Sup. Ct. J. 969 (Tex. 1999); Maritime Overseas Corp. v. Ellis, 971 S.W.2d 402, 409, 41 Tex. Sup. Ct. J. 683 (Tex. 1998); E.I. du Pont de Nemours & Co., Inc. v. Robinson, 923 S.W.2d 549, 556, 38 Tex. Sup. Ct. J. 852 (Tex. 1995). This is true because reliability of an expert's opinions is a question of admissibility. Helena Chem. Co. v. Wilkins, 47 S.W.3d 486, 499, 44 Tex. Sup. Ct. J. 675 (Tex. 2001); Gammill v. Jack Williams Chevrolet, 972 S.W.2d 713, 726, 41 Tex. Sup. Ct. J. 1117 (Tex. 1998) ("All expert testimony should be shown to be reliable before it is admitted."). "Preliminary questions . . . concerning admissibility of evidence shall be determined by the court . . . ." *TEX. R. EVID. 104(a)*; *see also* Gammill, 972 S.W.2d at 718; Robinson, 923 S.W.2d at 556; *TEX. R. EVID. 705(c)* **[**43]** ("If the court determines that the underlying facts or data do not provide a sufficient basis for the expert's opinion under *Rule 702 or 703*, the opinion is inadmissible.").

The majority, without citation to any authority, brushes aside the evidentiary *Robinson* hearing in this case as "a different decision-maker in a different proceeding." They could not be more wrong. First, the roles of the trial court and jury as decision-makers are not coterminous; the trial court is not a fact finder: "The trial court's role is not to determine the truth or falsity of the expert's opinion." Robinson, 923 S.W.2d at 558; Weingarten Realty Advisors v. Harris County Appraisal Dist., 93 S.W.3d 280, 285 (Tex. App.--Houston [14th Dist.] 2002, no pet.). To the contrary, "the trial court must be careful not to step into the role of the fact finder in weighing credibility . . . ." Green v. Tex. Workers' Comp. Ins. Facility, 993 S.W.2d 839, 843 (Tex. App.--Austin 1999, pet. denied). Instead, determination of admissibility is a question of law, not a jury decision. *See* N. Dallas Diagnostic Ctr. v. Dewberry, 900 S.W.2d 90, 93-94 (Tex. ***[**44]*** App.--Dallas 1995, writ denied); Weingarten, 93 S.W.3d at 285 ("Reliability is an admissibility issue for the trial court, not a weight-of-the-evidence issue for the fact finder.").

Second, a *Robinson* hearing, whether held pretrial or at trial, is the same proceeding as trial. An opponent of expert testimony may object to reliability when the evidence is offered at trial. Maritime, 971 S.W.2d at 409. At trial, a challenge to an expert is typically made through a *voir dire* examination outside the presence of the jury:

> **[*193]** Prior to the expert giving the expert's opinion or disclosing the underlying facts or data, a party against whom the opinion is offered . . . in a civil case may [] be permitted to conduct a *voir dire* examination directed to the underlying facts or data upon which the opinion is based. This examination shall be conducted out of the hearing of the jury.

TEX. R. EVID. 705(b); *see, e.g.,*Guadalupe-Blanco River Auth. v. Kraft, 39 S.W.3d 264, 266 (Tex. App.--Austin 2001), *rev'd*, 77 S.W.3d 805, 45 Tex. Sup. Ct. J. 628 (Tex. 2002) (both opinions identifying *voir dire* challenge to reliability); N. Dallas Diagnostic Ctr., 900 S.W.2d at 93, 96. **[**45]** However, through case law, Texas courts have been urged to determine *Robinson* issues pretrial: "it is imperative to ventilate any *Robinson* issues as early as possible, preferably as a pretrial matter." Maritime, 971 S.W.2d at 412 (Gonzalez, J., concurring); see Regan v. Schlumberger Tech. Corp., 2001 Tex. App. LEXIS 7387, No. 01-00-00026-CV, 2001 WL 1344077, at *3 (Tex. App.--Houston [1st Dist.] Nov. 1, 2001, pet. denied) (not designated for publication) ("We, too, urge early *Robinson/Havner* hearings . . . ."). A pretrial *Robinson* hearing is no different than one held during trial. We appropriately consider an evidentiary *Robinson* hearing to be the same as a *voir dire* held during trial. Naturally, we would consider a *voir dire* directed at an expert's reliability upon appellate review of the issue. *See* Guadalupe-Blanco River Auth., 77 S.W.3d at 807. Accordingly, it is imperative that we consider the evidentiary hearing held pretrial. We should not punish those litigants who ventilate reliability issues early by refusing to consider the gatekeeper's hearing. Under the majority's approach, the trial court is converted from a gatekeeper **[**46]** to "idle spectator." *See* Maritime, 971 S.W.2d at 412 (quoting Robinson, 923 S.W.2d at 554).

2. If Held Reliable, No Repetition Necessary

The majority also states that when Exxon renewed its objections at trial, the plaintiffs had the opportunity to prove scientific reliability and develop a full record. The impact of this holding is, frankly, a waste of judicial

resources and an evidentiary absurdity. First, having passed muster in the gatekeeper's hearing, a proponent of expert testimony does not need to parrot the evidence of reliability at trial. *See* Judge Harvey Brown, *Procedural Issues Under Daubert*, 36 HOUS. L. REV. 1133, 1148 (1999). In fact, the rules of evidence permit an expert to testify at trial without disclosure of underlying facts or data: "The expert may testify in terms of opinion or inference and give the expert's reasons therefor *without prior disclosure of the underlying facts or data*, unless the court requires otherwise." *TEX. R. EVID. 705(a)* (emphasis added).

Second, addressing reliability pretrial, rather than before the jury, allows a full presentation of the issue. As the Texas Supreme Court **[**47]** has noted, judges may be better-equipped to determine reliability than juries. *See* Robinson, 923 S.W.2d at 558. This is because a judge has the benefit of documents and briefs, whereas similarly detailed information could easily overwhelm the issues before the jury. *Id.* The judge "can freely ask questions in a preliminary hearing and thus glean more information" without the risks associated with explaining reliability to a jury. *Id.* In so doing, the trial court independently evaluates the underlying data. *See Havner, 953 S.W.2d at 713*. Additionally, a hearing before the trial court, as opposed to trial before the jury, solves rule-based problems with developing the record. For instance, in reviewing the trial record, the majority states it is hard-pressed to conduct a *Havner* review without the epidemiological **[*194]** studies on which plaintiffs' experts relied. However, such studies are not admissible at trial even under the learned treatise hearsay exception. *See TEX. R. EVID. 803(18)* (statements from learned treatises may be read into evidence, but not received as exhibits). In contrast, in determining reliability in hearing, a trial court **[**48]** "is not bound by the rules of evidence except those with respect to privileges." *TEX. R. EVID. 104(a)*. In the case before us, this explains why the trial court examined epidemiological studies, but such studies were not admitted at trial before the jury.

Third, a proponent of expert testimony has the burden to prove reliability the *first* time the opponent objects. *See* Guadalupe-Blanco River Auth., 77 S.W.3d at 807 ("Once the [opponent] made its objection, the burden was on [the proponent] to establish that [the expert's] opinion was reliable."); Robinson, 923 S.W.2d at 557 (at point of motion to exclude, proponents bore burden to establish admissibility); *see also* Frias v. ARCO, 104 S.W.3d 925, 927 (Tex. App.--Houston [14th Dist.] 2003, no pet.) (summary judgment opinion). In this case, Exxon objected pretrial and, because the court denied Exxon's motions pretrial, the plaintiffs met their burden to the trial court's satisfaction. No authority then requires repeated proof of reliability just because objections are renewed. Nor is there any rule requiring plaintiffs to incorporate by reference at trial their proof from **[**49]** the pretrial hearing. [2] Here, Exxon's repeated objections to reliability accomplished two things only. They assured preservation of error, *see* United Parcel Serv., Inc. v. Tasdemiroglu, 25 S.W.3d 914, 916 (Tex. App.--Houston [14th Dist.] 2000, pet. denied), and gave the trial court the opportunity to reconsider its previous rulings. [3] *Cf.* Clark v. Trailways, Inc., 774 S.W.2d 644, 647, 32 Tex. Sup. Ct. J. 424 (Tex. 1989) (renewed objections promote efficient administration of justice by providing a trial court with a final opportunity to prevent the erroneous admission of evidence).

[50] 3. Jury Determines Weight and Credibility**

The majority concludes that a no-evidence challenge to reliability "tests the jury's decision after trial, looking at the whole trial record to see if any evidence supports the verdict." Although the majority examines the trial record for more than a scintilla of reliability, [4] reliability need not be proved before the jury like an element of plaintiffs' cause of action. A negligence cause of action has just four elements: (1) a legal duty; (2) breach of that duty; (3) proximate cause; and (4) damages. Mission Petroleum Carriers, Inc. v. Solomon, 106 S.W.3d 705, 170, 46 Tex. Sup. Ct. J. 649 (Tex. 2003). Causation evidence only becomes "no evidence" if it is unreliable. *See* Weingarten, 93 S.W.3d at 285. Further, as explained above, reliability is a question of law for the trial court. If an opponent never objects, experts can testify at trial to causation without ever proving their opinions are based on reliable foundations. *See* Maritime, 971 S.W.2d at 411 (failure to timely object waives issue).

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[2] Nor did Exxon need to incorporate by reference evidence from the pretrial hearing. However, by suggesting that either party could incorporate such proof by reference at trial, the majority again implicitly acknowledges our need to review the evidence which the trial court reviewed as gatekeeper.

[3] And the trial court did reconsider its rulings as to four plaintiffs, finding no reliability and thus no evidence of causation.

[4] For instance, the majority states "it cannot grant even a scintilla of weight" to general references to studies that are not in the trial record.

[51]** **[*195]** The trial court's gatekeeping function, however, does not supplant the opportunity to expose weaknesses in expert testimony before the jury. Weingarten, 93 S.W.3d at 285. Under *Robinson* standards, the jury continues "to assess the weight and credibility of the proffered testimony." Robinson, 923 S.W.2d at 558. This is consistent with the rules of evidence: "This rule [that the trial court determines admissibility] does not limit the right of a party to introduce before the jury evidence relevant to weight and credibility." *TEX. R. EVID. 104(e)*. Cross-examination remains "the traditional and appropriate means of attacking shaky but admissible evidence." Gammill, 972 S.W.2d at 728; *cf.* Keo v. Vu, 76 S.W.3d 725, 734 (Tex. App.--Houston [1st Dist.] 2002, pet. denied) ("Further, factual weaknesses underlying an expert's causation opinion generally go to the testimony's weight, rather than its admissibility . . . .").

4. Exxon's Cross-Examination

Given the generalities of direct testimony proffered by plaintiffs, the majority should hesitate to conclude that the experts' testimony was unreliable based on **[**52]** cross-examination and studies absent from the appellate record. As I pointed out above, an expert may testify on direct without revealing underlying facts and data and without repeating the evidence of reliability from the pretrial hearing. *See TEX. R. EVID. 705(a)*. Thus, plaintiffs' experts testified on direct at trial in generalities, without offering studies, literature, or data on which they relied. For instance, Dr. Goldstein testified that since his deposition in this case, he found literature supporting a relationship between benzene and ALL. [5] Dr. Stuart Lloyd Shalat testified, "Most of what I'm relying on already exists in the peer-reviewed literature." Dr. Marvin Legator testified that "science" helped him form the opinion that ALL could result from benzene exposure because "as we did more and more studies, we added more and more leukemias and lymphomas in terms of what benzene can do."

[53]** The majority concludes, via Exxon's cross-examination, that no epidemiological study meeting *Havner*'s standards supports the experts' opinions. Aside from epidemiological studies, perhaps the experts relied upon *in vitro* human cellular studies. Or *in vivo* studies. Or animal studies. The cross-examination does not foreclose these possibilities. While cross-examination of Dr. Goldstein regarding epidemiological studies was very effective, perhaps Dr. Shalat or Dr. Legator relied upon an epidemiological study meeting *Havner* standards. Again, this was not foreclosed by cross-examination. In my opinion, it's extremely difficult to determine reliability solely based on cross-examination at trial if a plaintiff meets its burden of proof in a pretrial hearing. And in this case, while the cross-examination was quite damaging, without reviewing the *Robinson* hearing record, cross-examination goes only to weight and credibility. *Cf.* Maritime, 971 S.W.2d at 414 (Gonzalez, J., concurring) (stating cases in which expert testimony is untenable on its face, and thus excusing a *Robinson* hearing, "will be comparatively rare"); Gammill, 972 S.W.2d at 728 **[**54]** (availability of cross-examination does not relieve the trial court of its threshold responsibility as gatekeeper).

Further, the *Robinson* and *Havner* factors are flexible and non-exhaustive. *See Havner, 953 S.W.2d at 718-19*; Robinson, ***[*196]*** 923 S.W.2d at 557; *see also* Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 593-94, 125 L. Ed. 2d 469, 113 S. Ct. 2786 (1993) (promoting flexible inquiry rather than a definitive checklist); Coastal Tankships, U.S.A., Inc. v. Anderson, 87 S.W.3d 591, 599, 611 (Tex. App.--Houston [1st Dist.] 2002, pet. denied) (en banc) ("pertinent, suggested inquiries in assessing the reliability of expert testimony are applied *flexibly* and are *not exclusive or required*."). Trial courts are also granted deference in their selection of the factors to use in determining reliability. Kumho Tire Co. v. Carmichael, 526 U.S. 137, 152-53, 143 L. Ed. 2d 238, 119 S. Ct. 1167 (1999). Without the pretrial hearing record, we do not know if the trial court used additional factors or which *Robinson* and *Havner* factors it assessed.

Because there was an evidentiary *Robinson* **[**55]** hearing, the full bases of the experts' opinions should have been revealed there. It is unsound and poor precedent to assume that cross-examination was conclusive without consideration of the very hearing in which reliability was tested. Using a partial record contradicts the Texas Supreme Court's admonition "that courts should make a determination of reliability from *all* the evidence." *Havner, 953 S.W.2d at 720* (emphasis added).

5. What We Review and How

[5] The majority emphasizes cross-examination of Dr. Goldstein in which he admits he provided no animal or epidemiological studies to Exxon since his deposition. However, this goes to supplementation of discovery, not the existence or non-existence of studies.

Throughout this dissent, I have emphasized review of the *Robinson* hearing, even when it is held pretrial. The majority contends I have misconstrued admissibility of expert testimony with its legal sufficiency. I am not the first to be accused of eroding the distinction. *See* Lucinda M. Finley, *Guarding the Gate to the Courthouse: How Trial Judges are Using Their Evidentiary Screening Role to Remake Tort Causation Rules*, 49 DEPAUL L. REV. 335, 376 (1999). Litigants have also urged that admissibility and sufficiency reviews are distinct, although both involve the reliability of expert testimony. *See* Austin v. Kerr-McGee Ref. Corp., 25 S.W.3d 280, 284 (Tex. App.--Texarkana **[**56]** 2000, no pet.).

However, others have recognized that review of reliability, even in the context of a no-evidence challenge, requires review of the *Robinson* hearing. The pretrial *Robinson* hearing "should be recorded by the court reporter. Without a record from the hearing, the appellant will not be able to show harm." MICHOL O'CONNOR, O'CONNOR'S TEXAS RULES: CIVIL TRIALS 289, § 3.5 (2002). Further, an appeal "from a final judgment rendered in a trial in which the trial court ruled on a motion to exclude an expert . . . must include the record from the hearing in the appellate record." *Id.* 290, § 5.1. This is because a party may offer evidence at the hearing and, having prevailed, not present it before the jury. *See* Judge Harvey Brown, *Procedural Issues Under Daubert*, 36 HOUS. L. REV. 1133, 1139 (1999). "The evidence from the hearing will be considered in determining both admissibility and, indirectly, the sufficiency of the evidence, even if the evidence is not fully presented to the jury." *Id.* Indeed, the Texas Supreme Court has stated that reliability issues go to "the admissibility of expert evidence rather than the legal sufficiency **[**57]** of the evidence." Gen. Motors Corp., 997 S.W.2d at 590.

Finally, as to standard of review, the Texas Supreme Court has recognized that a no-evidence complaint may be sustained when the record shows one of the following: (1) a complete absence of a vital fact; (2) the court is barred by rules of law or evidence from giving weight to the only evidence offered to prove a vital fact; (3) the evidence offered to prove a vital fact is no more that a mere scintilla; or (4) the evidence establishes conclusively the opposite of the vital fact. Maritime, 971 S.W.2d at 409. By challenging reliability **[*197]** of the experts' testimony, and thus admissibility, Exxon contends the testimony amounts to no evidence because a "rule of law or evidence," specifically *Rule of Evidence 702*, precludes giving the evidence any weight. *See id.*; Exxon Pipeline Co. v. Zwahr, 35 S.W.3d 705, 718 (Tex. App.--Houston [1st Dist.] 2000) (Taft, J., dissenting), *rev'd*, 88 S.W.3d 623, 45 Tex. Sup. Ct. J. 691 (2002). Accordingly, I would begin our analysis by examining the reliability, and therefore admissibility of the testimony, Zwahr, 35 S.W.3d at 718 (Taft, **[**58]** J., dissenting), recognizing the trial court's discretion in determining the matter. *See* id. at 719.

I recognize that some courts conduct *de novo* or something similar to a *de novo* review in this context. *See* Mo. Pac. R.R. Co. v. Navarro, 90 S.W.3d 747, 750 (Tex. App.--San Antonio 2002, no pet.); Austin, 25 S.W.3d at 285. However, I would review for an abuse of discretion because the Texas Supreme Court has done so in the three post-*Havner* cases in which it addressed reliability in the context of a no-evidence challenge. *See* Exxon Pipeline Co. v. Zwahr, 88 S.W.3d at 628-29 (reversing Zwahr, 35 S.W.3d at 705); Guadalupe-Blanco River Auth., 77 S.W.3d at 807 (reversing Guadalupe-Blanco River Auth., 39 S.W.3d at 264); Helena Chem. Co., 47 S.W.3d 486 at 487, 499 (Tex. 2001) (affirming Helena Chem. Co. v. Wilkins, 18 S.W.3d 744 (Tex. App.--San Antonio 2000)). In dissenting, however, I find that the degree of deference to give on appellate review is a less pressing question than whether we can ignore evidence from the gatekeeper's **[**59]** hearing.

APPELLATE LAW SPURNED

1. The Record Filed

The primary reason the majority discounts the pretrial *Robinson* hearing is that the transcript and evidence from it are not in the appellate record. [6] Under established appellate law, we cannot consider whether error exists unless the record relating to the alleged error is before us. Foust v. Estate of Walters, 21 S.W.3d 495, 504 (Tex. App.--San Antonio 2000, pet. denied). Further, as appellant, Exxon had the burden to bring forth a sufficient record showing error. *See* Melendez v. Exxon Corp., 998 S.W.2d 266, 274 (Tex. App.--Houston [14th Dist.] 1999, no pet.). "Absent such a record, the reviewing court must presume that the evidence before the trial judge was adequate to support the decision."

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[6] Nor can it appear in the record. On file with this court at our request is a letter from the official court reporter in which she advises that there was no reporter's record made by her on September 30, 1999, the day of the *Robinson* hearing.

Simon v. York Crane & Rigging Co., 739 S.W.2d 793, 795, 31 Tex. Sup. Ct. J. 40 (Tex. 1987); *see also Foust, 21 S.W.3d at 504*.

[60]** The effect of these precepts on this case ends in an affirmance: two plaintiffs keep their verdict and four plaintiffs collect nothing. For Exxon's appeal, because we are missing the pretrial *Robinson* record, we must assume that evidence of reliability presented at the *Robinson* hearing supports the trial court's decision to admit the experts' testimony. Because we must assume the testimony was properly admitted, the experts' causation evidence is legally sufficient for plaintiffs James Makofski, Jr. and John Russell. The lack of a *Robinson* record cuts both ways in this case, however, and similarly hinders the cross-appeal filed by plaintiffs Andrea Russell, Janie Devora, Phillip Devora, and Codi Stennett. They contend that one study, the ATSDR, supports causation testimony regarding benzene exposure and their health problems. However, the ATSDR is not in the trial record. By the same standards that stymie Exxon's appeal, we must assume the *Robinson* hearing **[*198]** record supports the trial court's ultimate decision that expert testimony in their cases was unreliable.

2. Legal Contortions

To avoid the effect of the missing record, the majority engages in legal contortions. **[**61]** First, the majority excuses Exxon from bringing forward a complete appellate record because neither party raised or briefed the argument. Certainly, inadequate briefing can result in waiver of an appellant's issue. *See Campbell v. State, 85 S.W.3d 176, 184, 45 Tex. Sup. Ct. J. 1251 (Tex. 2002)* (cited by majority). However, waiver of error due to inadequate briefing is distinct from the burden to bring forth a record on appeal. Additionally, because it is an appellant's burden to bring forth a record showing error, I do not assign blame to the appellees, as the majority does, for failing to brief the omissions in the appellate record. I also do not excuse the missing record, as the majority does, because "the very capable attorneys and experienced trial judge all certainly knew when a record is required and when it is not." There is no deference on appellate review based on attorneys' or judges' reputations.

Second, the majority implies that 270 pages of Exxon's motions to exclude and supporting exhibits suffice in lieu of the reporter's record from the *Robinson* hearing. [7] In this approach, the majority pretends that the *Robinson* hearing was held by submission. In fact, when the plaintiffs **[**62]** originally sought a hearing by submission, Exxon protested and sought an evidentiary hearing, which was held 11 days before the start of trial. The majority also fails to acknowledge that plaintiffs filed written objections to some of the exhibits attached to Exxon's motions. We do not know whether these objections were ruled upon. And we also do not know whether the exhibits attached to Exxon's motions encompass those offered and admitted in hearing. I do not imply that a trial court must hold an evidentiary hearing instead of ruling by submission. [8] However, if an evidentiary hearing is held, one party's filings in the clerk's record are not a substitute on appeal for the reporter's record of the hearing.

[63]** Third, the majority surprisingly and wrongly concludes that there was no evidence presented at the pretrial hearing. [9] To this end, the majority assumes that a trial court would hold an evidentiary hearing only to receive live testimony from the experts. I disagree. I do not suggest that the pretrial hearing in this case included live testimony. Nor do I imply that all evidentiary hearings on reliability must include live testimony. Instead, evidence in a pretrial evidentiary hearing could include depositions, studies, and documents. [10] In this case, the trial record and clerk's record reflect that the trial court held an evidentiary hearing, but do not delineate what evidence was offered or admitted in that hearing.

[64]** **[*199]** Fourth, the majority wrongly concludes that under my analysis, "every time a pretrial motion . . . is denied without a reporter's record, we must presume

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[7] If the plaintiffs filed responses to Exxon's motions to exclude, Exxon did not bring them forward on appeal. The clerk's record is entirely one-sided.

[8] *Cf. Tanner v. Westbrook, 174 F.3d 542, 546 (5th Cir. 1999)* (where trial court refused to hold pretrial hearing, appellate court reviewed documents that were submitted pretrial).

[9] The majority reaches this conclusion because Exxon's counsel introduced himself to the experts at trial and cross-examined them without referring to the pretrial hearing.

[10] For instance, with regard to contamination causation, the plaintiffs contend they used "Exxon's numbers" to calculate the amount of benzene lost in the blowout. Exxon's documents evidencing such numbers could be presented without live testimony.

any jury verdict thereafter is valid (no matter how scientifically unsound)." We will only need a reporter's record of evidentiary *Robinson* hearings, not hearings by submission. Further, I leave open the possibility that in rare cases, expert testimony will be untenable on its face. *See* Maritime, 971 S.W.2d at 414 (Gonzalez, J., concurring).

Fifth, the majority presumes that the parties "never requested that the hearing be recorded." The record is silent as to whether the parties requested or excused the court reporter from the pretrial hearing. However, failure to request that a hearing be recorded does not excuse an appellant's burden to bring forth a record showing error. Further, Exxon specifically designated the pretrial *Robinson* record as part of the appellate record:

> The pre-trial "*Robinson*" hearing held on September 30, 1999. . . . This request includes all exhibits offered or admitted into evidence either for the Court or for the jury at the hearing of September 30, 1999 or at trial **[**65]** on the merits beginning October 11, 1999 and ending November 19, 1999.

Thus, we cannot presume the record we have is the entire record pertinent to reliability. *See* Andrews v. Sullivan, 76 S.W.3d 702, 704 (Tex. App.--Corpus Christi 2002, no pet.) (sufficiency challenge waived where party did not request partial record and failed to file exhibits in appellate record); *see also* Sandoval v. Comm'n for Lawyer Discipline, 25 S.W.3d 720, 722 (Tex. App.--Houston [14th Dist.] pet. denied).

Sixth, in discounting the missing *Robinson* record, the majority states it was plaintiffs' "burden to present scientifically reliable evidence of causation *at trial*." In citing *Havner* and *Robinson* for this proposition, the majority ignores *Maritime*, decided after those cases. In *Maritime*, the court encouraged pretrial resolution of reliability issues. 971 S.W.2d at 409. Thus, the majority's citations to *Havner* and *Robinson* are taken out of context. Neither case supports the contention that we review only the evidence presented at trial before the jury.

Seventh, the majority circularly concludes that the trial cross-examination **[**66]** both proves unreliability and rebuts the presumption we give to the missing record. However, the majority fails to cite a single case in which the presumption given the missing record is rebutted by that which is available. [11] I have already discussed the limitations of cross-examination in this case given the generalities of direct testimony. The cross-examination simply did not foreclose the bases of the experts' opinions. If the bases of their opinions are **[*200]** not foreclosed, we presume that the missing record provides the evidence of reliable bases. I think a stronger case for rebuttal would be presented, for example, where the existing record proves that no evidence was offered, admitted, or submitted in the missing pretrial hearing. Or where the existing record clearly delineates what the trial court reviewed in pretrial hearing. In truth, it is the majority who pretends in this case, allowing its reactions to the trial testimony to blur the requisites for appellate review.

[67]** Finally, if all the above approaches fail the majority's reasoning, the majority creates a safety net by simply making its own appellate record. Before oral argument, we became aware of some of the deficiencies in the record. During argument, the parties acknowledged that the trial court examined scientific studies not included in the appellate record. At Chief Justice Brister's request, the parties filed fourteen studies as exhibits to their briefing. His request was an implicit acknowledgment that we must review the evidence which the trial court reviewed. Exxon properly objected, asserting that such studies were outside the trial record. We may not create a new record on appeal. Richards v. Comm'n for Lawyer Discipline, 35 S.W.3d 243, 251 (Tex. App.--Houston [14th Dist.] 2000, no pet.); Intermarque Auto. Prod., Inc. v. Feldman, 21 S.W.3d

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[11] The majority miscites Candelier v. Ringstaff, 786 S.W.2d 41, 44 (Tex. App.--Beaumont 1990, writ denied). Unlike this case, in *Candelier*, the appellant requested a *partial* reporter's record from two post-trial hearings only. Under the rules of appellate procedure, the "appellate court must presume that the partial reporter's record designated by the parties constitutes the entire record for purposes of reviewing the stated points or issues." TEX. R. APP. P. 34.6(c)(4). In one of the post-trial hearings, the *Candelier* trial court clearly stated that it was considering the evidence from trial in determining the post-trial issue. Thus, the Beaumont appellate court realized it did not have the entire record pertinent to the issue.

Here, we know the record pertinent to reliability is incomplete because (1) during trial, the trial court and attorneys referred to the pretrial objections, rulings, and evidence; (2) the clerk's record reflects that Exxon demanded and received an evidentiary *Robinson* hearing; and (3) in oral argument, the attorneys acknowledged the trial court examined studies not a part of the trial record.

544, 547 n.3 (Tex. App.--Texarkana 2000, no pet.). Materials attached to briefing, but not in the appellate record, cannot be considered by an appellate court. Till v. Thomas, 10 S.W.3d 730, 733-34 (Tex. App.--Houston [1st Dist.] 1999, no pet.); TEX. R. APP. P. 34.1.

JUDICIAL PERSPECTIVE

[68]** Judges are human and are affected by the facts of the cases before them. In this case, the trial record imparts a gut reaction that plaintiffs' experts are, at best, on the minority (though perhaps leading) edge of science and, at worst, absolute quacks. As judges, we are also aware of cases discussing the limitations of science, benzene and toxic exposure, and cancers. *See* Frias, 104 S.W.3d at 925; Daniels v. Lyondell-Citgo Ref. Co., Ltd., 99 S.W.3d 722, 726 (Tex. App.--Houston [1st Dist.] 2003, no pet.); Navarro, 90 S.W.3d at 747; Austin, 25 S.W.3d at 280. However, justice should not give into visceral reactions to a case.

We must follow procedural rules. We must enforce requisites for appellate review. If procedural and appellate law preclude a review on the merits, we must write accordingly. And in this case, the incomplete record precludes a true review on the merits. Whether an appellate court can disregard the gatekeeper's hearing in a no-evidence context is the material issue in this case, upon which a take nothing judgment or an affirmance rests. The answer to the issue will also clarify for all courts **[**69]** and litigants the correct procedure for challenging an expert and proving reliability. I thus urge review of this case by the Texas Supreme Court. Although we may have decided the case differently were we jurors, appellate court judges must apply rules and law consistently and even-handedly. Otherwise, we diminish rule of law, predictability, and regularity necessary to guide future litigants.

Under the standards I have discussed in this dissent, I would overrule Exxon's issues, overrule plaintiffs' cross-issues, and affirm the trial court's judgment. Because the majority has not followed established rules and standards for appellate review, I dissent.

/s/ Charles W. Seymore

Justice