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Supreme Court of Kentucky

FINAL

2006-SC-000695-DG

DATE 11-13-08 ELLA Crowl, DC.

DAVID RAY BURTON

APPELLANT

V. ON REVIEW FROM COURT OF APPEALS
NOS. 2005-CA-000226-MR AND 2005-CA-000455-MR
JEFFERSON CIRCUIT COURT NO. 00-CI-005983

CSX TRANSPORTATION, INC.

APPELLEE

OPINION OF THE COURT BY CHIEF JUSTICE MINTON

AFFIRMING

I. INTRODUCTION.

We granted discretionary review of a Court of Appeals decision affirming a defense verdict for CSX Transportation, Inc., in the trial of David Ray Burton's Federal Employers Liability Act (FELA) claim. Burton claimed that he suffered permanent brain damage from exposure to toxic fumes emitted by solvents¹ he used while working for CSX. At trial, much of the expert testimony focused upon whether Burton's current physical difficulties were likely caused by toxic encephalopathy (TE) brought on by exposure to the fumes at CSX or by multiple sclerosis (MS).

¹ A solvent is usually a "liquid substance capable of dissolving or dispersing one or more other substances. . . ." MERRIAM-WEBSTER COLLEGE DICTIONARY 1116 (10th ed. 1998). Apparently, the solvents at issue here were used to clean railroad equipment by dissolving grease, dirt, or other substances.

Burton argues that the Court of Appeals erred by affirming the trial court's judgment in the face of alleged reversible errors on several key evidentiary rulings made at trial. Burton contends that the trial court erred by (1) admonishing the jury to disregard causation opinions from Burton's trial expert, neurophysiologist Dr. Lisa Morrow, while (2) allowing the jury to consider the opinions of CSX's trial expert, physician Dr. William Waddell, who criticized the numerous studies that linked solvent exposure to brain damage, and (3) forbidding any reference by Burton to CSX workers' involvement in a study of TE conducted by Dr. Martine RoBards.

We affirm because we find no reversible error by the trial court or the Court of Appeals.

II. FACTS AND PROCEDURAL BACKGROUND.

Burton worked for CSX for several years at CSX's South Louisville shops, beginning in the late 1970s and continuing through most of the 1980s. By 1991, his work with CSX had dwindled to part-time, so he left his job at CSX and found employment elsewhere.

While working for CSX in various jobs, Burton often cleaned locomotives and other railroad equipment using a cleaning solvent called "DowClean" and other substances, such as brown soap and alkali cleaners. According to Burton, the fumes from DowClean and other solvents² sometimes caused light-

² In his brief, Burton states that DowClean is a mixture of 1,1,1 trichloroethane and perchlorethylene; and he mentions other potentially toxic cleaners, including trichloroethylene, brown soap, lye, degreasers, and the two individual components

headedness so that he would have to take “fresh air breaks” before resuming work.³ While working at CSX, Burton never formally reported to CSX or any government agency any adverse health effects from the solvent fumes. Apparently, at the time he quit work at CSX, he was not aware of any permanent adverse health effects from solvent exposure.

By 1995, Burton had developed troublesome chronic symptoms such as dizziness, headaches, and vision difficulties, as well as memory loss and mood changes. Neurologist Dr. Lynn Simon diagnosed and treated Burton for MS, although she noted that some of his symptoms were not typically associated with that disease. A few years later, Martine RoBards, a Ph.D. neuropsychologist,⁴ examined and tested Burton and concluded that he suffered from TE, a brain dysfunction allegedly caused by exposure to toxins in the solvents Burton encountered at CSX. Dr. Simon began to wonder if the MS diagnosis was correct; and some other physicians who examined Burton

of DowClean. At times, the parties refer to some of these solvents collectively as chlorinated hydrocarbons.

³ Burton has alleged that CSX failed to take necessary safety precautions to protect its workers from the dangers of solvent exposures. We will not discuss these allegations in detail because they are not relevant to the issues before us on this appeal.

⁴ *Neuropsychology* is defined as “[a] specialty of psychology concerned with the study of the relationship between the brain and behavior, including the use of psychological tests and assessment techniques to diagnose specific cognitive and behavioral deficits and to prescribe rehabilitation strategies for their remediation.” STEDMAN’S MEDICAL DICTIONARY 1314 (28th ed. 2006).

eventually came to believe that he did not suffer from MS but, instead, had TE.⁵

III. ANALYSIS.

A. Trial Court's Admonition to Disregard Causation Opinion From Dr. Lisa Morrow Not Reversible Error.

After the trial court and jury viewed the entire videotape deposition of Burton's trial expert, Dr. Lisa Morrow, the trial court admonished the jury to disregard any opinion Dr. Morrow may have expressed concerning the causation of Burton's cognitive impairment. Burton claims this was reversible error. We disagree, because any error in giving this admonition was harmless.⁶

Dr. Morrow has an impressive resume, which includes her employment as a professor of psychiatry at a medical school and her publication of numerous studies and articles about TE. Despite her credentials, Dr. Morrow herself testified that she could not state the cause of Burton's cognitive impairment. By her own admission, she deferred instead to neurological

⁵ *Encephalopathy* is "[a]ny disorder of the brain." *Id.* at 636. Apparently, there is some controversy over whether long-term occupational exposure to toxic substances (such as solvents) actually leads to any sort of long-lasting damage to the brain according to the deposition testimony of various physicians; thus, *toxic encephalopathy* is a somewhat controversial diagnosis.

⁶ Kentucky Rules of Civil Procedure (CR) 61.01 provides that:

"No error in either the admission or the exclusion of evidence and no error or defect in any ruling or order or in anything done or omitted by the court or by any of the parties is ground for granting a new trial or for setting aside a verdict or for vacating, modifying, or otherwise disturbing a judgment or order, unless refusal to take such action appears to the court inconsistent with substantial justice. The court at every stage of the proceeding must disregard any error or defect in the proceeding which does not affect the substantial rights of the parties."

experts on that issue. In light of Dr. Morrow's admission, we cannot see how the trial court's admonishing the jury to disregard Dr. Morrow's opinion on causation, which she never definitively articulated, had any impact on the jury's verdict.

Dr. Morrow stated that she assessed Burton for cognitive impairment.⁷ She testified that his symptoms were "consistent" with TE, although she admitted that they might also be consistent with MS. She stated that her ability to determine the cause of such impairments was somewhat limited because she could not rule out certain other causes, such as MS, that she was not qualified to diagnose. Although she often wrote down a diagnosis code for patients for insurance purposes, she admitted that her cause descriptions for medical records were largely based on the patient's self-reported history. She said she did not necessarily medically diagnose patients except in very limited situations, such as that of Alzheimer's disease.

Burton contends that the trial court's limiting admonition was improperly given based upon an outdated assumption that only medical doctors could properly testify about the cause of a possible brain injury, despite Dr. Morrow's vast experience in researching and assessing patients and her role in training medical students on the hazards of solvent exposure. We

⁷ We note that Burton claims that Dr. Morrow treated many patients for TE. In our review, we came across some deposition testimony from Dr. Morrow indicating that she was involved in assessment rather than treatment of this condition. While it is possible that Dr. Morrow may have made inconsistent statements elsewhere about treating patients, whether or not she treated patients does not control whether the jury should consider her causation opinions. Rather, the fact that she admitted that she could not state the causation of Burton's ailments supports the validity of the trial court's limiting instruction.

note that the trial court allowed the unedited version of Dr. Morrow's videotaped testimony to be played to the jury. The trial court then directed the jury that Dr. Morrow's testimony was presented for the purpose of establishing the proper assessment of Burton's cognitive impairment but that it should not consider Dr. Morrow's opinion as to causation. Contrary to Burton's assertion that the trial court's admonition encouraged the jury to disregard all of Dr. Morrow's testimony, the trial court's instruction only admonished the jury to disregard any opinions as to causation, an area in which Dr. Morrow herself indicated that she could not reach a definite conclusion. In sum, the trial court's limiting instruction was consistent with Dr. Morrow's self-imposed limitation on the scope of her professional opinion.

The harmlessness of any error in limiting Dr. Morrow's causation testimony was confirmed by the jury's apparent disregard of the balance of medical causation testimony presented by Burton. Since both Dr. Douglas Linz and Dr. George Rodgers testified as experts on Burton's behalf that in their professional opinions, Burton's cognitive impairment was caused by his exposure to solvents at CSX, any consideration the jury would have otherwise given Dr. Morrow's causation opinion—to the extent she gave one—would have been cumulative. If the jury did not accept the testimony of Dr. Linz and Dr. Rodgers, who expressed their opinions on causation unreservedly, we seriously doubt that there is a reasonable possibility that the jury would have found for Burton based on Morrow's equivocal-at-best remarks on causation without the

trial court's limiting instruction. We find no reason to reverse this case based on the trial court's handling of this matter.

B. No Abuse of Discretion by Admitting Dr. Waddell's Testimony.

Burton contends that the trial court improperly admitted the opinion testimony of Dr. William Waddell, who criticized the numerous studies⁸ finding that exposure to solvents caused brain damage. In reviewing the trial court's ruling on the admissibility of expert testimony, we apply the abuse of discretion standard.⁹ We agree with the Court of Appeals that the trial court did not abuse its discretion in admitting Waddell's testimony.¹⁰

Burton argues that Waddell's opinions on this matter do not meet the threshold of reliability required by Daubert v. Merrill Dow Pharmaceuticals.¹¹

In following Daubert, this Court has recognized that trial courts must perform

⁸ According to Burton, there have been hundreds, maybe even a thousand, studies of a possible causal link between solvent exposure and cognitive impairment. While it would seem difficult for a single witness to examine such a large number of studies, this difficulty was fully and properly exploited by cross-examination—thus, possibly affecting the weight but not the admissibility of Dr. Waddell's opinions. We further note that Dr. Waddell claimed to have been studying the literature on this question for a number of years, so it would not be totally impossible for him to have reviewed the various studies over this time period.

⁹ Toyota Motor Corp. v. Gregory, 136 S.W.3d 35, 39 (Ky. 2004).

¹⁰ As stated by the Court of Appeals, Dr. Waddell's view of the literature was apparently admitted (at least in part) to rebut testimony from Burton's experts finding a valid causal link between solvent exposure and cognitive impairment based upon literature review. Naturally, we cannot just approve of the admission of this evidence as "rebuttal evidence"; but we must determine whether this expert testimony used for rebuttal met the Daubert standard to be properly admitted as evidence. See *id.* at 40 (going on to assess reliability of expert testimony under Daubert after noting that expert's testimony was presented to rebut testimony of other expert witness).

¹¹ 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993). While Daubert concerns the application of Federal Rules of Evidence (FRE) 702, we have applied it to govern the admissibility of expert testimony under our similar Kentucky Rules of Evidence (KRE) 702. See, e.g., Gregory, 136 S.W.3d at 39.

a “gate keeping function under KRE 702”¹² Generally, the trial court must determine whether the expert’s proffered testimony of “scientific, technical or other specialized knowledge” will “assist the trier of fact to understand or determine a fact in issue.”¹³ To admit the expert testimony, the trial court must determine that the testimony is both reliable and relevant to the case before it. In determining whether the testimony is reliable under Daubert, the trial court must assess whether the “reasoning or methodology” underlying the testimony is scientifically valid.¹⁴ A non-exclusive list of specific factors to consider in determining reliability has arisen in decisional law:

- 1) whether the theory or technique can be and has been tested;
- 2) whether the theory or technique has been subjected to peer review and publication;
- 3) the known or potential rate of error in using a particular scientific technique and the existence and maintenance of standards controlling the technique’s operation; and
- 4) whether the theory or technique has been generally accepted in the particular field.¹⁵

In the instant case, the trial court was not necessarily presented with assessing the reliability of a particular “theory or technique,” other than possibly a general theory that studies finding a causal link between solvent exposure and long-term brain damage or cognitive impairment were flawed. Rather, the trial court had to rule on the admissibility of an expert’s review of

¹² Gregory, 136 S.W.3d at 39.

¹³ *Id.*

¹⁴ *Id.* (quoting Daubert at 509 U.S. 592-93).

¹⁵ *Id.* at 40 (quoting Daubert, 509 U.S. at 593-94).

the literature and his opinions as to the validity of conclusions reached in the literature. To a certain extent, the specific factors usually considered in assessing the reliability of a particular technique or theory may not seem as appropriate in the context of assessing the reliability of one's review of the literature. Nonetheless, expert testimony based fully or primarily on literature review must be shown, like all other expert evidence, both relevant and reliable to pass muster under Daubert. In the instant case, we conclude that Dr. Waddell's testimony based on his review of the literature did pass muster under the Daubert rubric and that the trial court did not abuse its discretion by admitting it.

A high standard must be met for an expert's testimony based primarily or fully on literature review to be properly admitted in court under Daubert. For example, while federal case law states that expert literature review testimony may be admitted if the literature review was "performed appropriately[,]"¹⁶ such testimony is properly excluded if the proffered expert is not sufficiently qualified in the proper field of study to offer an opinion that is helpful to decide the specific questions presented in that case.¹⁷

¹⁶ Doe v. Ortho-Clinical Diagnostics, Inc., 440 F.Supp.2d 465, 472 (M.D.N.C. 2006).

¹⁷ *Id.* at 471-76 (excluding testimony of physician specializing in obstetrical genetics as unqualified to render opinion as to whether vaccines cause autism, in light of lack of published research on specific question, as well as lack of board certification in more relevant specialties). See also Newton v. Roche Laboratories, Inc., 243 F.Supp.2d 672, 677-78 (W.D. Tex. 2002) (excluding testimony of pharmacist as to whether acne drug could cause schizophrenia, in light of lack of a higher professional degree (such as M.D. or Ph.D.), lack of advanced training in pharmacology, lack of involvement in scientific research or academia (other than serving as a volunteer lecturer of medical school class, which could "hardly be

C. Dr. Waddell Was Sufficiently Qualified in Relevant Areas of Study to Render Opinion.

Burton contends that the trial court erroneously admitted Dr. Waddell's testimony based on his medical degree alone and that Dr. Waddell was not sufficiently qualified to render a helpful opinion on the specific relevant issues in this case. We note that Dr. Waddell did not directly address specific causation (whether Burton's individual ailments had been caused by solvent exposure or other factors),¹⁸ but rather addressed general causation¹⁹—whether exposure to solvents had been proven to cause long-term cognitive impairment or brain damage. We agree with Burton that a medical degree, standing alone, would not be sufficient qualification to allow a doctor to express an opinion on this general causation issue without some showing of expertise in relevant specific areas of study. But Waddell was sufficiently qualified to review the literature and render an opinion on the specific issue of

described as primarily scientific or pharmacological in nature”), and no expertise in causes of psychosis or any other more relevant field).

¹⁸ Dr. Waddell did not offer a diagnosis for Burton or state the cause of his ailments. He did state that, generally, brain damage from chemicals would occur immediately rather than after a period of latency (when no damage is observed for a long period after exposure). Since Burton's symptoms apparently did not become evident until years after his exposure to solvents at CSX, the jury might have inferred from this discussion that specific causation was less likely. Nonetheless, Dr. Waddell did not definitely state an opinion on specific causation.

¹⁹ Doe, 440 F.Supp.2d at 471 (defining *general causation* as being “established by demonstrating that exposure to a substance can cause a particular disease” and *specific causation* as being “established by demonstrating that a given exposure is the cause of a particular individual's disease.”) (citations and internal quotation marks deleted). As Waddell's testimony concerned only general causation rather than specific causation, whether Dr. Waddell examined Burton or his medical records is not a relevant consideration in determining the admissibility of Dr. Waddell's opinion.

whether long-term occupational exposure to solvents had been conclusively shown to cause permanent cognitive impairment and brain damage.

Before 1998, Dr. Waddell served as a professor and chaired the Department of Pharmacology and Toxicology at the University of Louisville Medical School. He devoted his career to academics and research rather than treating patients. He served on a national committee known as ACGIH (American Conference of Governmental and Industrial Hygienists). ACGIH set standards for workplace exposure to chemicals. Specifically, it set threshold limit values (TLVs) for various chemicals—in other words, the maximum amount of a chemical that a worker could safely be exposed to during a regular forty-hour workweek for a lifetime. Dr. Waddell testified that he chaired the ACGIH sub-committee that set the standards for chlorinated hydrocarbons, the chemical name for most substances at issue or main component of most substances at issue. He reviewed the scientific literature on effects of occupational exposure to chlorinated hydrocarbons for several years because these solvents are chemically quite similar to general anesthetics, which are actually organic²⁰ solvents, a subject on which he has delivered lectures to medical students for years. He also testified in his deposition to having done human and animal studies, although it is not clear what the subjects of these

²⁰ In this context, *organic* means “of, relating to, or containing carbon compounds. . . .” MERRIAM-WEBSTER’S COLLEGIATE DICTIONARY 817 (10th ed. 1998). The chlorinated hydrocarbons at issue would also be organic as they are presumably carbon compounds consisting of hydrogen, carbon, and chlorine.

studies were.²¹ So it is apparent that Dr. Waddell was certainly well educated on the specific subjects of toxicology (how exposure to substances can have harmful effects on the human body); safety issues concerning workplace exposure to chlorinated hydrocarbons; and, in general, the scientific research method. The fact that he devoted his career to academics and research rather than treating patients does not, by itself, make him less qualified or his testimony less reliable or less helpful to the jury.²²

D. Dr. Waddell's Opinions Have Sufficient Scientific Basis to be Offered.

In determining whether an expert's opinion testimony based on a review of literature should be admitted, other courts have considered not only the individual's qualifications, but also whether a sufficient scientific basis exists for their opinion:

²¹ Appellees' brief claims that Dr. Waddell performed animal and human studies regarding solvents. But the portion of his deposition testimony that they cite in support of this proposition does not specifically state the subject of the animal and human studies:

Q. Well, Doctor, is it your belief that animal studies which formed the basis for many of our concerns, overexposures to various elements are not valid because they don't involve actual human subjects?

A: No, no, no. I've done many animal studies and I've also done human studies, and I've done both and the whole question is how do you extrapolate from animal to human.

²² See Siharath v. Sandoz Pharmaceuticals Corp., 131 F.Supp.2d 1347, 1354 (N.D.Ga. 2001). ("Dr. Dukes—whom Defendant most strenuously challenges—is an exceptionally qualified expert on the issue of adverse drug reactions. The fact that he has chosen to spend his professional life in the world of public policy and academics instead of clinical practice in no way reduces his expertise in the field of adverse drug reaction science. Defendant's argument to the contrary minimizes the contributions made to medical science by those who accept the call of public service and selflessly remain in that service throughout the duration of their careers.").

Where proffered expert testimony is not based on independent research, but instead on such a literature review, the party proffering such testimony must come forward with other objective, verifiable evidence that the testimony is based on scientifically valid principles. One means of showing this is by proof that the research and analysis supporting the proffered conclusions have been subjected to normal scientific scrutiny through peer review and publication.²³

Where the expert has not conducted independent research on the specific issue in dispute, his opinions may still be sufficiently scientifically valid if supported by objective sources:

Establishing that an expert's proffered testimony grows out of pre-litigation research or that the expert's research has been subjected to peer review are the two principal ways the proponent of expert testimony can show that the evidence satisfies the first prong of Rule 702. Where such evidence is unavailable, the proponent of expert scientific testimony may attempt to satisfy its burden through the testimony of its own experts. For such a showing to be sufficient, the experts must explain precisely how they went about reaching their conclusions and point to some objective source—a learned treatise, the policy statement of a professional association, a published article in a reputable scientific journal or the like—to show that they have followed the scientific method, as it is practiced by (at least) a recognized minority of scientists in their field.²⁴

Despite Dr. Waddell's apparent lack of independent research on TE or the specific question of solvent exposure causing cognitive impairment, the conclusions he reached from reviewing the relevant literature—that studies of this subject were flawed and do not conclusively establish a causal relationship—are nonetheless "backed up" by at least one scientific "objective

²³ Doe, 440 F.Supp.2d at 470 (internal quotations marks omitted), (citing Daubert v. Merrell Dow Pharmaceuticals, Inc., [Daubert II] 43 F.3d 1311, 1318 (9th Cir. 1995) (opinion on remand to 9th Circuit from United States Supreme Court)).

²⁴ Daubert II, 43 F.3d at 1318-19.

source” showing that his conclusions are not totally inconsistent with the scientific method.²⁵ That objective source is found in the NIOSH (National Institute of Occupational, Safety & Health) RFA (request for application), which shows that at least a minority of scientists were concerned with the validity of the prior studies. Dr. Waddell also cited one particular study (the Gade study) that cast doubt on other studies finding a causative link between occupational solvent exposure and cognitive impairment. According to Burton’s brief, this study “merely concluded that a group of painters who had previously been exposed to solvents and diagnosed with [TE] using non-standardized testing, did not have the disease based upon subsequent standardized neuro-psychological testing.” According to Dr. Waddell’s deposition, the Gade study discounted the value of earlier studies finding a positive causal link by finding no difference in levels of cognitive impairment once they controlled for age, IQ, and educational level. In sum, the Gade study cast doubt on some other studies finding a causal link between solvent exposure and cognitive impairment.

Certainly, a trial court as the gatekeeper should exclude a so-called expert’s unsupported assertions, the so-called expert’s *ipse dixit*, from reviewing literature.²⁶ But under the facts of this case, Dr. Waddell’s opinion appears to have at least some support in the scientific community as shown by

²⁵ See Daubert II, 43 F.3d at 1318-19.

²⁶ Doe, 440 F.Supp.2d at 471; Goodyear Tire & Rubber Co. v. Thompson, 11 S.W.3d 575, 581 (Ky. 2000), (*quoting Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 157, 119 S.Ct. 1167, 143 L.Ed.2d 238 (1999)).

published requests for further studies with more controls and the Gade study. We recognize that where, as here, an expert is not testifying from the expert's own independent scientific research but has been asked for an opinion for purposes of litigation, the admissibility of his testimony must be carefully scrutinized.²⁷ But where, as here, the expert is highly qualified in relevant specific fields of study; and the expert's opinions or conclusions are supported by objective sources showing compliance with the scientific method, "as practiced by (at least) a recognized minority of scientists in their field[,]"²⁸ the evidence is sufficiently reliable to be admitted in court so long as it is relevant.

E. Dr. Waddell's Testimony Relevant to Key Issue in Dispute.

Not only was Dr. Waddell sufficiently qualified to render an opinion and his opinion sufficiently supported on a scientific basis, his testimony was relevant because it addressed the disputed issue of general causation: whether the solvents Burton was exposed to have been shown to cause cognitive impairment and long-term brain damage. Dr. Waddell testified to having reviewed the scientific literature regarding the effects of long-term occupational exposure to solvents in the workplace. In his opinion, studies to that point failed to establish conclusively that long-term occupational exposure to

²⁷ Daubert II, 43 F.3d at 1317. ("One very significant fact to be considered is whether the experts are proposing to testify about matters growing naturally and directly out of research they have conducted independent of the litigation, or whether they have developed their opinions expressly for purposes of testifying. That an expert testifies for money does not necessarily cast doubt on the reliability of his testimony, as few experts appear in court merely as an eleemosynary gesture. But in determining whether proposed expert testimony amounts to good science, we may not ignore the fact that a scientist's normal workplace is the lab or the field, not the courtroom or the lawyer's office.").

²⁸ Daubert II, 43 F.3d at 1319.

solvents caused cognitive impairment. Dr. Waddell criticized the studies on several grounds. He criticized many of the studies as not identifying specifically what type of solvent was studied, since there are many different solvents with many different chemical properties. He also stated that the studies failed to provide adequate controls because they did not control for factors such as I.Q., age, or educational level. He also criticized them as not establishing dose-response levels (indicating at what dose exposure is safe versus the dose at which the substance has a harmful effect). He also noted that many studies involved animals exposed to massive doses of solvents and stated that it could be very difficult to infer anything from these studies about the effects of long-term, small-dose exposure to humans.

We find no error in the trial court's allowing Dr. Waddell's critique of the studies upon which Burton's general causation experts based their opinions. His testimony essentially presented another voice and another view in the dialogue over whether causation was proven. Burton's experts essentially presented the opposite voice and opposite view in this dialogue, concluding on the basis of their reviews of literature that solvents had been shown to cause cognitive impairment.²⁹ Just as one of Burton's experts, Dr. Linz, admitted that the general causation question here was somewhat controversial among the scientific community with criticism of studies and with a need for further

²⁹ Because the qualifications of Burton's experts who expressed opinions on general causation from their review of the literature are not disputed on appeal, we will not compare their qualifications with Dr. Waddell's or review their opinions on this matter in detail to assess their reliability.

research, we find no error in the trial court's allowing Dr. Waddell to critique the literature and provide an opposing viewpoint in light of his specific qualifications and the support for his positions in objective scientific sources.³⁰ So we find no error in the admission of Dr. Waddell's testimony.

F. No Abuse of Discretion in Disallowing References to CSX Workers in Studies of TE.

Burton contends that the trial court erred by disallowing witnesses' reference to CSX workers being involved in a study, which was conducted by Dr. RoBards, linking solvent exposure and brain damage or cognitive impairment. Before the trial, Dr. RoBards received a serious injury and was unable to appear and testify at trial. Dr. Linz testified at least briefly about the findings of Dr. RoBards's study, as well as others, although he was limited by a ruling of the trial court to referring to the subjects involved in Dr. RoBards's study as either "railroad workers" or "those affected by solvents."

Burton argues that he should have been allowed to refer to the study subjects as "CSX workers" to emphasize for the jury that the solvents he was exposed to at work were capable of causing his cognitive impairment. But we find no abuse of discretion in the trial court's ruling. Burton has not shown where he laid a foundation showing that the CSX workers involved in the

³⁰ We believe that allowing in both sides of the debate as to this somewhat controversial issue so long as the experts on both sides are sufficiently qualified and offer opinions with some degree of scientific reliability is proper. As Justice Schroder writing for this Court aptly stated, we have not required scientific certainty for admissibility under Daubert. Hyman & Armstrong, P.S.C. v. Gunderson, 2006-SC-000175-DG and 2006-SC-000179-DG, 2008 WL 1849798 at **11-13, ___ S.W.3d ___ (Ky. April 24, 2008).

RoBards study were subject to similar conditions at work as he was.³¹ Given this lack of foundation, we cannot find an abuse of discretion in the trial court's forbidding pointed reference to the RoBards study's subjects as "CSX workers" because the probative value of identifying the study's subjects as such was outweighed by the risk of undue prejudice. Without any indication that other "CSX workers" were subject to similar workplace conditions as Burton—such as working in the same area or being exposed to the same types and amounts of solvents—the fact that other CSX workers may have suffered similar symptoms is of diminished probative value in proving that Burton's ailments were caused by exposure to solvents at CSX.³² Furthermore, identifying the RoBards study's subjects as CSX workers without laying a proper foundation of similar circumstances would certainly pose a risk of

³¹ In arguing that evidence of other CSX workers suffering similar symptoms should have been admitted as relevant evidence, Burton cites cases that require that a sufficient foundation be laid by showing that the similar occurrences arose under similar conditions. See, e.g., Montgomery Elevator Co. v. McCullough, 676 S.W.2d 776, 783 (Ky. 1984) ("In a products liability design defect case, such evidence of similar product failures under similar conditions is relevant and admissible"); Bush v. Michelin Tire Corp., 963 F.Supp. 1436, 1451 (W.D.Ky. 1996) ("Most circuits have held that subsequent accidents are admissible to prove causation and dangerousness of a condition, if a proper foundation is laid. Those Kentucky courts which have admitted evidence of other accidents or product failures, have uniformly done so where there was a sufficient similarity of conditions and the evidence was not so technical as to cause undue confusion or waste of time.") (citations and internal quotation marks omitted).

³² Arguably, other CSX workers reporting symptoms consistent with TE might make it more probable that Burton suffered TE as a result of working for CSX. See KRE 401 (defining *relevant evidence* as "evidence having any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence."). But KRE 402 states that although relevant evidence is generally admissible, there are certain exceptions under the Kentucky Rules of Evidence and other sources. KRE 403 sets forth such an exception and holds that relevant evidence may be excluded if its probative value is outweighed by undue prejudice or confusion of the issues.

encouraging the jury to think that if other CSX workers were making the same sort of claims, then Burton's ailments must have also been caused by workplace solvent exposure even if there was insufficient proof of his individual exposure and a causal link to his symptoms. Thus, the trial court did not abuse its discretion under KRE 403.

IV. CONCLUSION.

For the foregoing reasons, the judgment of the Court of Appeals is hereby affirmed.

All sitting. All concur.

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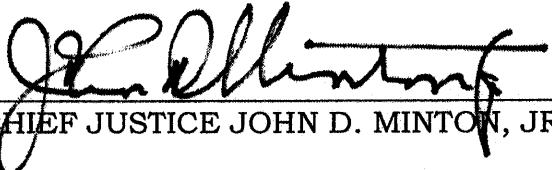
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APPELLEE

ORDER OF CORRECTION

The Opinion of the Court by Justice Minton, rendered October 23, 2008, is CORRECTED on its face by the substitution of pages 1 and 7 attached in lieu of the original pages 1 and 7 of the opinion. Said correction does not affect the holding.

ENTERED: December 17, 2008.


CHIEF JUSTICE JOHN D. MINTON, JR.