

UNITED STATES COURT OF APPEALS FOR THE SIXTH CIRCUIT

**JAMES P. CONDE; RHONDA L. CONDE; JAMES R. CONDE; AUTUMN CONDE; AND
KIMBERLY CONDE, PLAINTIFFS-APPELLANTS,**

v.

VELSICOL CHEMICAL CORPORATION, DEFENDANT-APPELLEE

No. 93-3092

Decided May 16, 1994

ON APPEAL from the United States District Court for the Southern District of Ohio. District No. 85-0063 8. George C. Smith, District Judge.

For JAMES P. CONDE, RHONDA L. CONDE, JAMES R. CONDE, AUTUMN D. CONDE, KIMBERLY B. CONDE, Plaintiffs - Appellants: David A. Kopech, ARGUED, BRIEFED, James R. Rishel, BRIEFED, Rishel, Myers & Kopech, Columbus, OH.

For VELSICOL CHEMICAL CORPORATION, Defendant - Appellee: Bruce J. Berger, Joe G. Hollingsworth, ARGUED, Spriggs & Hollingsworth, Washington, DC. David C. Greer, BRIEFED, Bieser, Greer & Landis, Dayton, OH. Steven Owens Dean, Young & Alexander, Dayton, OH.

Before: Kennedy, Martin, and Siler, Circuit Judges.

Author: Martin

BOYCE F. MARTIN, JR., Circuit Judge: Dr. James Conde, his wife Rhonda, and their three children appeal the district court's grant of summary judgment for Velsicol Chemical Corporation in this diversity products liability action. The Condes allege that Gold Crest C-100, Velsicol's commercial termiticide, is a defective product that caused health problems and a loss of property value after it was applied to the basement area of the Condes' home. The district court found that most of the expert testimony offered by the Condes with respect to the issue of medical causation was inadmissible, and further found that, even if it were admissible, the testimony was insufficient to allow a jury to conclude by a preponderance of the evidence that the Condes suffered personal injuries as a result of their exposure to chlordane. For the following reasons, we affirm.

I

In the first of its two opinions in this case, the district court stated the facts and relevant expert testimony in detail. *Conde v. Velsicol Chemical Corp.*, 804 F. Supp. 972 (S.D. Ohio 1992). We summarize, therefore, only those facts necessary for an understanding of this appeal. On April 8, 1983, Swat Exterminating Company applied Velsicol's Gold Crest C-1 00 termiticide to the basement area of the Condes' house under construction in Pomeroy, Ohio. During the application, Swat poured four hundred gallons of Gold Crest C-1 00 into holes drilled in the house's concrete foundation and soil perimeter. The foundation was water-saturated, and Swat did not plug the drill holes after filling them with the termiticide. By applying the termiticide in this manner, Swat violated federal criminal statutes relating to termiticide application, in addition to the express application instructions included in the termiticide's federally-approved label.

The primary active ingredient of Gold Crest C-1 00 is a chlorinated cyclodiene commonly referred to as chlordane. If ingested in very high doses by human beings, chlordane is a deadly toxin that affects the central nervous system. Soon after the application of chlordane to their house, all of the members of the Conde family began experiencing numerous physical problems, including headaches, nausea, diarrhea, and abdominal pain. The family cat died unexpectedly in August 1986, and subsequent tests revealed chlordane in the cat's liver. In November 1986, the Condes moved out of their house, and their acute symptoms subsided soon thereafter. Due to the chlordane contamination, and after a request by the Condes, the Meigs County, Ohio Board of Revision reassessed the value of the Conde home at zero.

Chemical analysis of air samples taken from the Conde home in 1984, 1987, and 1991 showed chlordane concentrations averaging less than one microgram per cubic meter of air. The permissible exposure level set

by the Occupational Safety and Health Administration in 1982 for workers engaged in the manufacture of chlordane was five hundred micrograms per cubic meter of air, assuming an exposure of eight hours per day, and fifty weeks per year. Nineteen epidemiological studies have shown no apparent ill effects in human beings exposed to this latter level of chlordane. No studies of long-term exposure to very low levels of chlordane have been conducted. Numerous tests performed on blood and tissue samples obtained from the Condes revealed no detectable chlordane, transnonachlor, or other chlordane metabolites.

On April 8, 1985, the Condes brought this diversity action in the United States District Court for the Southern District of Ohio against Velsicol and Swat Exterminating Company. After settling with Swat and amending their complaint, the Condes sought damages for personal injuries and property damage resulting from Velsicol's marketing of a defective and dangerous product. They also sought punitive damages from Velsicol for manufacturing a known defective product and for failing to report adverse chlordane testing results.

On October 13, 1992, the district court, in a comprehensive opinion, granted summary judgment for Velsicol on the issues of medical causation and product defect. *Id.* With respect to the medical causation issue, the court found that the testimony of three of the Condes' experts, Drs. McConnachie, Zahalsky, and Simon, was inadmissible under Federal Rules of Evidence 702 and 703, and further found that even if their testimony were admissible, it was insufficient to allow a jury to find, by a preponderance of the evidence, that Velsicol's chlordane termiticide caused the Condes' health problems. The court based its Conclusion primarily on the following facts: (1) the methods used by the Condes' experts, including "immune system panels," are experimental (i.e. not generally accepted by others

in the fields of toxicology and immunology), and the panels were conducted in a manner not conforming to generally accepted scientific protocols; (2) the experts were unable to connect *in vitro* tests, animal studies, and acute poisoning case evidence with the Condes' low levels of exposure and health problems; (3) none of the experts were able to point to peer-reviewed, scientific literature or studies supporting their theories of medical causation; (4) blood and tissue tests of the Condes did not reveal any chlordane or chlordane metabolites; and (5) the nineteen epidemiological studies had found no adverse health effects from chlordane doses hundreds of times higher than those to which the Condes were exposed.

On the issue of product defect, the district court applied the two-prong consumer expectation/risk-benefit analysis required by Ohio law under *Knitz v. Minster Machine Co.*, 69 Ohio St. 2d 460, 432 N.E.2d 814 (Ohio), cert. denied, 459 U.S. 857 (1982). The court found that, although the Condes initially had made out a claim on a consumer expectation theory, the risk-benefit analyses conducted by the Environmental Protection Agency both pre- and post-1983 did not establish that the risks of the product outweighed its benefits. Also, the court noted that the Condes did not adduce evidence showing that feasible, safer alternative products or formulations were available in the spring of 1983. The court thus granted summary judgment on both prongs of the test, stating with respect to consumer expectation that the Condes' failure to prove medical causation was fatal to that claim.

On December 28, 1992, the district court, in a second opinion, granted summary judgment for Velsicol on the Condes' remaining claims for property damage, psychological injury, and punitive damages. *Conde v. Velsicol Chemical Corp.*, 816 F. Supp. 453 (S.D. Ohio 1992). The court found that an award for property damage was inappropriate because the Condes did not

show that Gold Crest C-1 00 was a defective product, and that even if they had shown it to be defective, the Condes did not demonstrate that the termiticide was the cause in fact of any property damage. See *R.H. Macy & Co. v. Otis Elevator Co.*, 51 Ohio St. 3d 108, 554 N.E.2d 1313, 1316-17 (Ohio 1990) (plaintiffs must establish causation in fact in a strict liability case). The court further observed that the Condes failed to adduce credible evidence that a home properly treated with chlordane would suffer a diminution in value, that the failure to prove medical causation regarding the Condes' symptoms militated against a finding that Velsicol was liable for damages, and that the misapplication by Swat was the cause in fact of any property damage.

On the issue of psychological injury, the district court noted that without proof of a causal connection between the Condes' chlordane exposure and their physical injuries, the Condes could not recover without showing "severe and debilitating" fear and distress. *Igo v. Coachmen Industries, Inc.*, 938 F.2d 650, 656 (6th Cir. 1991). The court emphasized that the Condes lead active and varied lives, and that Swat's negligent application of Gold Crest C-100, rather than the nature of the product itself, was the actual cause in fact of any psychological injury. The court thus granted summary judgment to Velsicol on the psychological injury claim.

With respect to the claim for punitive damages, finally,

the district court stated that “there is simply insufficient data to conclude that chlordane . . . has a ‘great probability of causing substantial harm’ as required by the Ohio cases. Absent such a showing, an award of punitive damages against Velsicol is improper.” Conde, 816 F. Supp. at 458 (quoting *Calmes v. Goodyear Tire & Rubber Co.*, 61 Ohio St. 3d 470, 575 N.E.2d 416, 419 (Ohio 1991)). This timely appeal followed.

II

We review a grant of summary judgment *de novo*. *Brooks v. American Broadcasting Cos., Inc.*, 932 F.2d 495, 500 (6th Cir. 1991). Summary judgment is appropriate if “the record taken as a whole could not lead a rational trier of fact to find for the nonmoving party.” *Matsushita Electronic Industrial Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587, 89 L. Ed. 2d 538, 106 S. Ct. 1348 (1986). The nonmoving party must “set forth specific facts showing that there is a genuine issue for trial.” FED. R. CIV. P. 56(e). In determining whether there is a genuine issue for trial, we draw all reasonable inferences from the facts in the light most favorable to the Condes, as they were the nonmoving parties. *Matsushita*, 475 U.S. at 587.

In attacking the grant of summary judgment for Velsicol, the Condes allege that the district court erred by: (1) holding the testimony of their expert witnesses to be inadmissible; (2) denying the Condes the right to a jury trial guaranteed by the Seventh Amendment; (3) finding that Swat’s alleged and unproven negligence was the sole and proximate cause of any property damage suffered by the Condes; and (4) granting summary judgment for Velsicol on the medical causation, product defect, property damage, emotional distress, and punitive damages claims, as each of these claims presented material issues of fact.

We first address the closely related issues of medical causation and the admissibility of the Condes’ expert testimony. Under Ohio law, which we apply in this diversity action, medical causation must be proven by a preponderance of the evidence. *Novak v. United States*, 865 F.2d 718, 725 (6th Cir. 1989). The district court, relying on *Turpin v. Merrell Dow Pharmaceuticals, Inc.*, 959 F.2d 1349 (6th Cir.), cert. denied, 121 L. Ed. 2d 47, 113 S. Ct. 84 (1992), found that even if the Condes’ expert testimony were admissible, that testimony would not allow a jury to “conclude by a preponderance of the evidence that the Condes suffered personal injuries . . . as a result of their exposure to chlordane.” Conde, 804 F. Supp. at 1021. In *Turpin*, a products liability case involving the morning sickness drug Bendectin,

this Court determined that, even “taken in the light most favorable to the plaintiffs, the scientific evidence that provides the foundation for the expert opinion on causation in this case is not sufficient to allow a jury to find that it is more probable than not that Bendectin caused the minor plaintiff’s injury.” *Turpin*, 959 F.2d at 1350.

The Condes argue that the district court’s reliance on *Turpin* is misplaced, given the United States Supreme Court’s recent decision in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 125 L. Ed. 2d 469, 113 S. Ct. 2786 (1993). According to the Condes, the *Turpin* court impermissibly engrafted the additional requirement of “general acceptance” onto the language of Federal Rules of Evidence 702 and 703, with respect to the admissibility of scientific evidence. Thus, the Condes claim, the district court here improperly held their expert testimony to be inadmissible. See *Daubert*, 113 S. Ct. at 2794 (general acceptance, although an important factor, not a necessary precondition to admissibility of scientific evidence).

The holding in *Daubert*, however, dealt only with the circumstances under which expert testimony is admissible, and not with the separate question of when such testimony is sufficient to submit a case to the jury. We are concerned here with the latter determination as an independent basis for the district court’s grant of summary judgment. As we recently observed in *Elkins v. Richardson-Merrell, Inc.*, 8 F.3d 1068, 1073 (6th Cir. 1993) (quoting *Daubert*, 113 S. Ct. at 2798), cert. denied, 127 L. Ed. 2d 651, 114 S. Ct. 1299 (1994):

the Court in *Daubert* indicated that even if expert opinion or evidence on one side were relevant and admissible, if “insufficient to allow a reasonable juror to conclude that the position more likely than not is true,” it may be the basis for a directed verdict or a grant of summary judgment.

We also note that, in *Daubert*, the Supreme Court cited *Turpin* with approval. *Daubert*, 113 S. Ct. at 2798. These two cases are not inconsistent with each other because this Court, as did the Supreme Court, “construes *Turpin* to treat the plaintiff’s expert opinion indicating a basis of support for the plaintiff’s theories . . . to be admissible but ‘simply inadequate. . . [to] permit a jury to conclude that Bendectin more probably than not causes limb defects.’” *Elkins*, 8 F.3d at 1071 (quoting *Turpin*, 959 F.2d at 1360) (emphasis added). With this distinction in mind, the Condes’ contention that *Turpin* conditions expert testimony admissibility on “general acceptance” is untenable. Accordingly, we turn to the question of

whether the Condes' expert testimony, assuming that it is admissible, is sufficient to withstand summary judgment for Velsicol on the issue of medical causation.

After an exhaustive review of the record, which consists of nearly seven thousand pages, we conclude that the district court correctly described the substantive content of the proffered expert testimony. For the sake of convenience, and to avoid repetition, we will refer directly to the district court's published opinion in conducting our analysis of that evidence. See Conde, 804 F. Supp. at 972-1029.

Drs. McConnachie, Zahalsky, and Simon, who are non-medical doctors unqualified to render differential diagnoses of medical conditions, and Dr. Conde, a family practitioner, offered testimony purporting to link the Conde family's chlordane exposure to their subsequent health problems. Dr. McConnachie relied on the results of "immune system panels," which exhibited what he characterized as "abnormalities" in the functioning of the Condes' immune systems. However, Dr. McConnachie was unable to explain the mechanistic association between certain cell "markers" or activation molecules, which were the subjects of these tests, and his autoimmunity theory of immune system dysregulation. *Id.* at 999. He was also unable to explain why the Condes' panel test results changed between 1987 and 1991. *Id.* Both Drs. McConnachie and Zahalsky based their opinions that chlordane caused the Condes' health problems on a theory involving the release, over time, of chlordane stored in the body's fat cells and bone marrow. *Id.* at 998, 1000. However, numerous tissue, bone, and blood samples taken from the Condes revealed "no evidence of detectable amounts of chlordane accumulated in their bodies." *Id.* at 1026.

Dr. Simon offered testimony that James R. ("Ryan") Conde's liver enzyme levels are elevated, a condition which "is consistent with" hepatotoxicity caused by chlordane. *Id.* at 1002, 1026. Dr. Simon qualified this statement by admitting that common illnesses, in addition to some over-the-counter medications, can also elevate liver enzymes. *Id.* at 1002. Dr. Conde, the only medical doctor to testify for the plaintiffs despite the number of specialists who provided extensive medical care to the family, testified that in his opinion, his family's symptoms were caused by exposure to chlordane. As explained in thorough detail by the district court, however, the scientific literature cited by Dr. Conde does not support his Conclusion. *Id.* at 1003-1014. Nineteen epidemiologic studies in humans have found little evidence of long-term adverse health effects from chlordane doses hundreds of times higher than those the Condes were subjected to under a worst-

case scenario. *Id.* at 1014. Although the Condes cite published critiques of these studies, the critiques only underscore the need for further studies, and do not, as the district court noted, establish causation. *Id.* at 1025 n.54. Finally, the Condes' reliance on a 1987 draft Technical Support Document prepared by the Environmental Protection Agency, listing chlordane as a probable human carcinogen four years after the Condes' home was treated with Velsicol's termiticide, is misplaced. That document, based primarily on animal studies, concludes that "none of the available epidemiology studies of the chlorinated cyclodienes are adequate to establish either a negative or positive association between chlorinated cyclodiene exposure and carcinogenic risk." *Id.* at 1026.

After analyzing the testimony and documentary evidence, we believe that the present case is indistinguishable from Turpin. The Condes' non-medical experts can only state, as did the experts in Turpin with respect to Bendectin and birth defects, that chlordane exposure "is consistent with" the Condes' observed symptoms. Turpin, 959 F.2d at 1360. Drs. McConnachie, Zahalsky, and Simon are unable to exclude other potential causes for these symptoms, and their theories are inconsistent with the negative chlordane test results on the Condes' tissue and the vast majority of the relevant, peer-reviewed scientific literature. Dr. Conde, the only medical doctor to testify, "does not testify

on the basis of the collective view of his scientific discipline, nor does he take issue with his peers and explain the grounds for his differences." *Id.* The 1987 draft Technical Support Document, which relies on animal studies, is also not probative of medical causation by its own terms. In sum, the "analytical gap between the evidence presented and the inferences to be drawn on the ultimate issue . . . is too wide." *Id.* Accordingly, the Condes' expert testimony is insufficient to permit a jury to conclude, by a preponderance of the evidence, that chlordane exposure caused the Condes' health problems.

III

Given our Disposition of the medical causation issue, and the effect of that Disposition under Ohio law on the balance of the Condes' claims, the remaining assignments of error are without merit. We have explicitly rejected the Condes' argument that our analysis under Turpin requires a ruling on the credibility of the evidence, and that a grant of summary judgment under Turpin thus contravenes the Seventh Amendment right to a trial by jury. See Elkins, 8 F.3d at 1073 ("we do not believe that the prophylactic measure adopted

in Turpin violates the Seventh Amendment”). On the issues of product defect, property damage, emotional distress, and punitive damages, we affirm for the reasons summarized above, which are thoroughly explained in the district court’s Opinion and Order dated October 13, 1992, and its Opinion and Order dated December 28, 1992.

IV

For the foregoing reasons, the decision of the district court is affirmed.