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970 P.2d 98
114 Nev. 1468, Prod.Liab.Rep. (CCH) P 15,458
The DOW CHEMICAL COMPANY, Appellant/Cross-Respondent,
v.
Charlotte MAHLUM and Marvin S. Mahlum, Respond ents/Cross-Appellants.
No. 28600.
Supreme Court of Nevada.
Dec. 31, 1998.

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White & Meany, Reno; Ellis & Rapacki, Boston, Massachusetts; Farmer, Price, Hornsby & Weatherford, Dothan, Alabama, for Respondents/Cross-Appellants.

Thomas J. Hall, Reno; Robin S. Conrad, Washington, D.C., for Amicus Curiae Chamber of Commerce of the United States.

Perry & Spann, Reno; Hugh F. Young, Jr., Reston, Virginia; Armstrong, Teasdale, Schlafly & Davis and Jordan B. Cherrick and Jennifer S. Lohman, St. Louis, Missouri, for Amicus Curiae Product Liability Advisory Council, Inc.

Lionel Sawyer & Collins and Richard Horton, Reno; Covington & Burling and Bruce N. Kulik, Washington, D.C., for Amicus Curiae Pharmaceutical Research and Manufacturers of America.

Woodburn and Wedge and Casey W. Vlautin, Reno, for Amicus Curiae American Tort Reform Association.

Lemons, Grundy & Eisenberg, Reno, for Amicus Curiae Washington Legal Foundation.

Lynn G. Pierce, Reno, for Amicus Curiae Public Citizens.

Galatz, Earl & Bulla, Las Vegas, for Amicus Curiae Nevada Trial Lawyers Association.

OPINION

ROSE, J.:

This is an appeal and cross-appeal from a judgment against the Dow Chemical Company ("Dow Chemical") for fraud and negligence in connection with alleged defects in silicone gel breast implants manufactured by Dow Corning Corporation ("Dow Corning"). 1

The issues before this court are whether substantial evidence in the record supports the jury verdict and whether a new trial was warranted based on numerous alleged trial errors. We conclude that the verdict in this case cannot stand as to the fraud and accessory liability claims. We also conclude, however, that the verdict as to the negligence claim is supported by substantial evidence. Accordingly, we reverse the district court's judgment in part and affirm it in part. In addition, we conclude that the district court did not abuse its discretion in denying Dow Chemical's new trial motion.

I. Background

In 1943, Dow Chemical and Corning Incorporated formed Dow Corning for the express purpose of developing commercial and industrial uses for silicone technology. Dow Chemical and Corning Incorporated were, and continue to be, Dow Corning's only stockholders, each owning fifty percent of Dow Corning's stock. Dow Chemical and Corning Incorporated each also initially occupied four of ten seats on Dow Corning's board of directors; later, each parent held five seats out of fifteen.

In 1948, Dr. V.K. Rowe, a toxicologist at Dow Chemical, co-authored an article entitled "Toxicological Studies on Certain Commercial Silicones," which was published in the Journal of Industrial Hygiene and Toxicology. The article, while addressing the hazards surrounding the workplace handling of silicones, concluded that commercial silicones

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as a group were physically "inert" and were very low in toxicity.

From the 1940s until the 1970s, "every organosilicon compound" made by Dow Corning was sent to Dow Chemical for toxicological testing. While the majority of these tests concerned industrial handling hazards associated with the tested substances, Dow Chemical reports periodically advised Dow Corning on adequate product

warnings or on the need for further testing before marketing a particular product. The products containing such silicone ingredients included cosmetics, bathroom caulk, hair conditioner, and foot ointment.

In 1956, Dow Corning commissioned a study co-authored by Dow Chemical employee M.B. Chenoweth entitled "The Physiological Assimilation of Dow Corning 200 Fluid" ("the Chenoweth study"). This study, in its introductory paragraph, noted that prior Dow Chemical experiments had shown that many silicones were inert, and that the increasing use of silicones for medicinal purposes had triggered a need for information on their biological ramifications. The study further revealed that Dow Corning 200 fluid ("DC 200"), when injected intramuscularly in rats and administered orally in dogs, had migrated to all major organs of the body, including the brain. (DC 200 fluid is chemically equivalent to the Dow Corning 360 fluid ("DC 360") used in the breast implants at issue in this case .) This study was not published to the medical or scientific community.

In 1957, Dow Corning requested Dr. Rowe to set up a study on six silicone materials submitted by Dow Corning. Dr. Rowe arranged for the study ("the Miami study") to be performed by a professor of pharmacology at the University of Miami School of Medicine, Dr. William Deichmann. Although Dr. Deichmann performed the testing, Dr. Rowe designed the testing protocol for the research (i.e., the number and type of test animals, the duration of the test, and the test methods).

Two versions of the Miami study were prepared by Professor Deichmann for Dow Corning on the same date. The first, entitled "Six Silicone Materials," reported that six silicone compounds (the first five of which were different concentrations of DC 200 and the sixth, a substance identified as "Z-4141") that were fed to male and female rats resulted in no deleterious effects, with the following exceptions: (1) all six compounds reduced the number of granulocytic (white blood) cells in the peripheral blood of female rats, (2) the livers of all the rats fed the sixth compound (Z-4141) were significantly heavier than those of the control rats, and (3) the sixth compound induced a fatty infiltration or degeneration in the liver. The second version of the study, entitled "Five Silicone Materials," omitted all references to the sixth compound and its effects. The second version also explained that initial testing had suggested a depression in the number of leukocytes (white blood cells) in all female rats over a period of 90 days, but that subsequent work on control animals showed that silicone was not the cause of the decrease.

In 1959, Dow Corning established the non-profit Center for Aid to Medical Research, which provided the medical community with medical products and research regarding the uses of silicone for medical applications. In the early 1960s, Dr. Thomas Cronin, a plastic surgeon and researcher from Baylor University, approached Dow Corning about the possibility of using silicones in breast implants. In 1962, Dow Corning commenced clinical trials on silicone breast implants. Dow Corning sold $93,000.00 worth of breast implants in 1962. 2

In 1964, Dow Corning formed its Medical Products Division. Also in 1964, Dow Chemical acquired a substantial interest in Gruppo Lepetit, an Italian pharmaceutical company that had, in some foreign countries, an exclusive distribution agreement with Dow Corning to market Dow Corning's medical line, including its breast implants. Lepetit sold Dow Corning breast implants outside the United States throughout Europe, South America, and Australia.

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From its inception, Dow Corning has enjoyed physical proximity with Dow Chemical, being located just "across the road and down the way" in Midland, Michigan. In 1965, Dow Corning created a Bioscience Research Department to explore the potential biological activities of organosilicon compounds. The department was housed in the same building as Dow Chemical's toxicology and research laboratories until 1970. Until 1968, Dow Corning lacked its own toxicology laboratory and staff and relied on outside contract laboratories, such as Dow Chemical, for toxicological testing and information. Dow Corning scientists often sought input from Dr. Rowe and other Dow Chemical scientists regarding silicone technology and toxicological effects. In 1968, Dow Corning established its own toxicology laboratory, but for the first two years, it shared the same building as Dow Chemical's toxicology laboratory. Dow Corning continued thereafter to share laboratory facilities and animals with Dow Chemical, and its scientists continued to consult with Dow Chemical personnel regarding toxicological research. From 1968 until 1973, Dow Corning's new toxicology laboratory and staff were headed by a former Dow Chemical toxicologist, Kenneth Olson. In 1973, Olson returned to work for Dow Chemical; Olson testified that in his capacity as the chief toxicologist for Dow Corning, he likely knew that Dow Corning's breast implants contained silicone fluid as a component.

Dow Chemical was not the sole testing facility doing research for Dow Corning. Between 1964 and 1976, Dow Corning commissioned outside laboratories, often those recommended by Dow Chemical, to conduct animal testing and long-term studies on breast implants and other silicone products. In 1967, Dow Corning entered into a joint research and development agreement with Dow Chemical "relating to the physiological effects resulting from

ingestion or injection into the systems of animals or men of particular physiologically active silicones." The two companies also agreed to "jointly share the costs and ... share the profits and losses of any commercialization."

Also in 1967, Dow Corning implemented a two-year study on miniature Silastic breast implants in dogs, conducted by an outside laboratory, the Food and Drug Research Laboratories, Incorporated ("FDRL"). An internal Dow Corning memorandum in 1967 referenced that Dr. Rowe was one of the consultants who recommended this study. Although the study appears to have been principally designed by FDRL, part of the testing protocol may have involved Dr. Rowe.

In 1970, Dow Corning enlisted Dow Chemical to conduct a pathology test on the biological effects of DC 360 fluid. Gary Sparschu, a Dow Chemical research pathologist, reported to Dow Corning that the tests showed the liquid silicone had migrated to major organs of the test animals, including the bone marrow, and that the fluid had decreased the brain weights of female rats in two test groups. This information was not shared with the scientific or medical community.

In 1975, Dow Chemical and Dow Corning entered into a trademark agreement wherein Dow Chemical granted Dow Corning the right to use its trade name "Dow" and trademark. In return, Dow Chemical obtained the right to inspect Dow Corning's manufacturing processes to assure the quality of its products and to approve or disapprove any products manufactured, distributed or sold under the Dow Chemical trademark. This agreement also stated that "Dow Company and Corning Company formed [Dow Corning] in 1943 and since then have continuously owned or controlled equally all of the issued share capital of [Dow Corning], and have controlled its operations, including the quality of its goods and services."

Although Dow Corning began selling breast implants in 1962, the record is unclear as to the identity of the silicone fluid used in this early prototype. Dow Corning introduced the Silastic I breast implant, containing DC 360 fluid, in 1975 and the Silastic II breast implant, at issue in this case, in 1982. The Silastic II breast implant was marketed solely under Dow Corning's trademark and trade name, not Dow Chemical's.

In 1991, the United States Food and Drug Administration ("FDA") conducted a premarket approval program for all manufacturers who wished to continue marketing and distributing silicone gel implants. Dow

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Corning submitted its premarket approval application to the FDA. Subsequently, the FDA suspended the use of silicone gel implants for cosmetic or augmentation purposes because of concerns about their safety, and limited their use to urgent medical situations or limited clinical trials.

II. Facts and Procedural History

The matter at bar is one of many cases pending across the country wherein breast implant recipients have sued Dow Chemical alleging that it is legally responsible for defects in Dow Corning's silicone breast implants.

In August 1985, as part of reconstructive surgery following a bilateral subcutaneous mastectomy, Charlotte Mahlum elected to receive silicone gel breast prostheses (hereinafter "breast implants"). Dow Corning manufactured the two Silastic II breast implants that Mahlum's surgeon implanted. The Silastic II implant is made up of several components. A clear outer shell of silicone rubber called an elastomer contains the silicone gel and is the protective barrier between the gel and the implant host. The silicone gel itself is comprised of eighty to eighty-five percent DC 360 silicone fluid.

In 1990, Mahlum's health began to deteriorate. In July 1993, one of Mahlum's breast implants ruptured, requiring the surgical removal of both implants. The surgeon was unable to remove all of the silicone gel from Mahlum's body, leaving approximately ten percent of the silicone materials embedded in muscle, tissue, and blood vessels under her arms and ribs. Mahlum's health continued to deteriorate after the explantation surgery.

In September 1993, Mahlum and her husband, Marvin Mahlum, filed suit against Dow Corning, Dow Chemical, and a number of other defendants, alleging that she had contracted an atypical autoimmune disease as a result of the rupture of one of her Silastic II breast implants. On May 15, 1995, Dow Corning petitioned for bankruptcy protection. In July 1995, the district court granted the Mahlums' motion to sever their claims against Dow Corning. (All defendants other than Dow Corning and Dow Chemical were dismissed prior to Dow Corning's bankruptcy.) In October 1995, the Mahlums proceeded to trial solely against Dow Chemical.

At trial, the Mahlums sought to prove that Dow Chemical, by contributing technology and expertise at the time of Dow Corning's formation and by subsequently conducting or participating in testing of silicone products and materials, should be subject to direct causes of action with respect to products manufactured and distributed by Dow Corning. Specifically, the Mahlums alleged that Dow Chemical could be found directly liable for fraudulently concealing information about the dangers of silicone, conspiring with Dow Corning to effectuate such fraudulent concealment, aiding and abetting Dow Corning's fraudulent misrepresentations about silicone safety, acting in concert with Dow Corning to effectuate such fraudulent misrepresentation, and negligently performing an

undertaking--testing the toxicity of liquid silicone--for Dow Corning. All of the Mahlums' tort claims were based, ultimately, on the assumption that Mahlum's injuries were proximately caused by defective silicone breast implants.

After a four-week trial, the jury returned a verdict against Dow Chemical on the claims of (1) fraudulent concealment, (2) aiding and abetting Dow Corning's fraudulent misrepresentation, (3) acting in concert with Dow Corning to commit fraudulent misrepresentation, and (4) negligent performance of an undertaking. The jury found in favor of Dow Chemical on the claim of conspiracy to commit fraudulent misrepresentation. The jury awarded Charlotte Mahlum $38,654.00 in past damages and $3,915,000.00 in future damages, and awarded Marvin Mahlum $200,000.00 in future damages. The jury also awarded the Mahlums $10,000,000.00 in punitive damages.

After judgment was entered on November 7, 1995, Dow Chemical filed a timely motion for judgment notwithstanding the verdict or, in the alternative, a new trial. On February 21, 1996, the district court denied these alternative motions.

Dow Chemical timely appealed to this court, challenging the judgment of the district court, and the district court's denial of

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its motion for a new trial. Specifically, Dow Chemical argues that (1) it is entitled to reversal of the Mahlums' judgment against it for fraudulent concealment, aiding and abetting Dow Corning, acting in concert with Dow Corning, and negligent performance of an undertaking, or, in the alternative, (2) a new trial is warranted as a result of numerous trial errors, including allegedly erroneous evidentiary rulings, improper jury instructions, and attorney misconduct. As an additional ground for new trial, Dow Chemical also argues that the compensatory damages award is excessive, and that the punitive damages award is constitutionally excessive.

Having considered the parties' appellate briefs, the amicus briefs, and the voluminous record, and having heard oral argument, we conclude that the judgment against Dow Chemical is infirm as to the intentional tort claims. Accordingly, we reverse the judgment against Dow Chemical on those claims. However, we also conclude that substantial evidence in the record supports the judgment against Dow Chemical on the claim of negligent performance of an undertaking. Finally, we conclude that the district court did not err in denying Dow Chemical's motion for a new trial.

III. Discussion

A. Standard of review

In general, the jury's findings will be affirmed on appeal if they are based upon substantial evidence in the record. Prabhu v. Levine, 112 Nev. 1538, 1543, 930 P.2d 103, 107 (1996). "Substantial evidence has been defined as that which 'a reasonable mind might accept as adequate to support a conclusion.' " Id. (quoting State, Emp. Security v. Hilton Hotels, 102 Nev. 606, 608, 729 P.2d 497, 498 (1986)).

B. Causation

The Mahlums had to show that Dow Corning was negligent or manufactured unsafe, defective breast implants before showing that Dow Chemical was liable in conjunction with Dow Corning. The Mahlums pleaded both negligence and strict liability against Dow Corning, and under either theory they were obligated to demonstrate causation. See Price v. Blaine Kern Artista, Inc., 111 Nev. 515, 518, 893 P.2d 367, 369 (1995) (causation is germane to both negligence and strict tort liability). Causation consists of two components: actual cause and proximate cause. See Sims v. General Telephone & Electric, 107 Nev. 516, 815 P.2d 151 (1991). To demonstrate actual cause with respect to Dow Corning's product, the Mahlums had to prove that, but for the breast implants, Charlotte Mahlum's illnesses would not have occurred. Id. at 524, 815 P.2d at 156. The second component, proximate cause, is essentially a policy consideration that limits a defendant's liability to foreseeable consequences that have a reasonably close connection with both the defendant's conduct and the harm which that conduct created. Id.

We conclude that the Mahlums introduced substantial evidence that Dow Corning's defective breast implants caused her illnesses. The evidence demonstrated that Mahlum developed myriad illnesses following breast implant surgery. Silicone gel probably bled from the breast implants shortly after implantation, and Mahlum's left breast implant later ruptured and spilled silicone gel into her body. The explantation surgeon was unable to remove all of the silicone gel from Mahlum's chest, and left approximately ten percent of the silicone imbedded in muscle, tissue and blood vessels under her arms and ribs. Mahlum's health continued to deteriorate after the explantation surgery. By 1995, Mahlum experienced shaking spells, itching, tingling in her hands and feet, slurring of her speech, seizures, discoloration in her hands and legs, headaches, dry eyes, loss of hair, memory loss, sleeplessness, pain in her joints, armpits and chest, and loss of coordination. Later, she increasingly lost control of her muscles.

The Mahlums provided causation evidence in the form of expert testimony. Expert testimony is admissible if scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or

determine a fact in issue. NRS 50.275. Demonstrating causation in cases involving medical products often requires expert

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medical testimony. See Prabhu, 112 Nev. at 1544, 930 P.2d at 108 (proof of causation in medical malpractice cases may be proved by expert testimony). Once the district court certifies an expert as qualified, the expert may testify to all matters within the expert's experience or training. See Fernandez v. Admirand, 108 Nev. 963, 969, 843 P.2d 354, 358 (1992). Here, the district court properly exercised its discretion to qualify several physicians as the Mahlums' expert witnesses to testify on the subject of her injuries and whether Dow Corning's implants caused those injuries. 3

The Mahlums adduced sufficient evidence at trial for a jury to decide that Dow Corning's breast implants actually caused Mahlum's injuries. The trial evidence was substantial in showing that Mahlum's current health problems manifested themselves around the time the left breast implant ruptured and released its silicone gel into her body. Three expert witnesses, all board-certified medical doctors, including Mahlum's treating rheumatologist, testified that Mahlum's injuries were caused by her implants.

For example, Dr. Eric Gershwin, an immunologist from the University of California, Davis, and author of a number of articles about silicone and the immune system, testified that liquid silicone impairs the body's immune system. Liquid silicone, he testified, causes the body to create autoantibodies that attack the body's own organs and tissues. In essence, autoantibodies cause the human body to turn on itself. When silicone bleeds from the breast implant, it can enter the lymph nodes and from there travel to other organs, including the heart, the lungs, the nerves, and the brain. The lymph nodes try to cleanse the body of silicone oil, but cannot. Dr. Gershwin examined Charlotte Mahlum and testified that in her case, silicone had reached and reacted with her brain, demonstrated by an MRI (magnetic resonance imaging) of her brain that shows certain "punched-out" lesions. He also opined that silicone has damaged Mahlum's nerves and nerve sheaths (demyelinization), resulting in nerve disfunction. Mahlum also had increased levels of anti-GM-1 antibody, which Dr. Gershwin had seen in other women with silicone gel breast implants. In Dr. Gershwin's opinion, Mahlum suffered from a multiple-sclerosis-like disease and progressive dysfunction of the nerves, resulting from exposure to silicone. Mahlum also displayed many symptoms that other women with autoimmune diseases and silicone breast implants experience, including livedo reticularis (blotching of the skin), sicca symptoms (dryness of the eyes and mouth), aching muscles and joints, fatigue, loss of hair, memory problems, numbness, tremors, and seizures.

Dr. John Monroe Eaton, Charlotte Mahlum's treating neurologist, echoed many of Dr. Gershwin's conclusions, although he did not provide specific testimony that silicone caused Malhum's illnesses. Dr. Eaton testified that Mahlum's symptoms corresponded to multiple-sclerosis-like autoimmune disease, axonal neuropathy, and demyelinization, all of which are caused by antibodies attacking her nervous system. He testified that the axon is like a wire that connects the brain to other parts of the body, and the myelin is the sheath around the nerve itself, like insulation around a wire. When the axon or the myelin is disturbed, many problems can occur, including loss of sensation/numbness, livedo reticularis, loss of muscle control, dryness of the eyes and mouth, shrinking muscles, and chorea (twitching). As previously noted, Charlotte Mahlum displayed these symptoms. Dr. Eaton further testified to Mahlum's raised antibody count, in addition to a "crawling" sensation under the skin that appears to be related to the nerve damage she had experienced. A majority

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of other silicone breast implant patients Eaton has treated experienced similar nervous system disorders and autoimmune diseases.

Dr. Steven Atcheson, a rheumatologist, observed Mahlum's symptoms and, based on his training and experience in treating over one hundred women who had silicone gel breast implants, concluded that the symptoms were caused in large part by exposure to silicone. Atcheson testified that women with breast implants displayed symptoms of fatigue, joint and muscle pain, sleep disturbances, hair loss, skin rashes, dryness of the eyes and mouth, and numbness or tingling in their hands and feet. These symptoms are part of what he terms "atypical autoimmune disease," which he believes can be caused by silicone gel breast implants. He has treated Charlotte Mahlum, and he noted that she shares many of the same symptoms as other women who have silicone gel breast implants.

Based upon the evidence discussed above, a reasonable jury could conclude that but for the breast implants, Mahlum would not have suffered from myriad illnesses.

Next, the Mahlums adequately demonstrated that Charlotte Mahlum's injuries were a foreseeable result of Dow Corning's sale of these products. Prior tests of DC 200 (chemically equivalent to DC 360 as used in Dow Corning's Silastic II breast implants) illustrated that silicone will migrate throughout a person's body, ultimately residing in various major organs and tissues, including the brain. Subcutaneous injections of DC 200 in rabbits showed

inflammation at the injection sites after twenty-four hours. Tests of DC 200 on calf hides indicated damage to the calf hide after ten days. A test on DC 360 suggested that it decreased the white blood cell counts and changed liver and brain weights in rats. Evidence showed that Dow Corning was aware that the envelope containing the silicone gel had a tendency to bleed silicone into the patient's breast area. In light of the foregoing knowledge, it was foreseeable that the silicone used in breast implants was probably harmful to women.

Although Dow Chemical disputes the conclusions of the Mahlums' experts, the jury was entitled to rely on their testimony. This court has long adhered to the rule that when there is a conflict in the evidence, the verdict or decision will not be disturbed on appeal. See, e.g., Frances v. Plaza Pacific Equities, 109 Nev. 91, 94, 847 P.2d 722, 724 (1993). Stated differently, a jury's verdict will not be overturned if it is supported by substantial evidence unless the verdict was clearly erroneous when viewed in light of all the evidence presented. Bally's Employees' Credit Union v. Wallen, 105 Nev. 553, 779 P.2d 956 (1989). This verdict was not clearly erroneous and is supported by substantial evidence that Dow Corning breast implants caused Mahlum's illnesses.

We are aware that causation is a scientifically controversial component of the plaintiff's case in breast implant litigation. The Mahlums, however, did not need to wait until the scientific community developed a consensus that breast implants caused her diseases. If she had, it might have been too late to recover, in light of the doctrine of laches and statutes of limitation and repose. The Mahlums' I complaint was not tried in the court of scientific opinion, but before a jury of her peers who considered the evidence and concluded that Dow Corning silicone gel breast implants caused her injuries. The jury in this case was properly instructed to consider the proof by a preponderance of the evidence. There is no evidence that the jury did otherwise. Science may properly require a higher standard of proof before declaring the truth, but that standard did not guide the jury, nor do we use that standard to evaluate the judgment on appeal. 4 For the foregoing reasons, we therefore conclude that the Mahlums provided substantial evidence on the issue of causation.

C. Fraudulent Concealment

The jury found that Dow Chemical had fraudulently concealed the dangers of

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liquid silicone from Mahlum. To establish a prima facie case of fraudulent concealment, a plaintiff must offer proof that satisfies five elements: (1) the defendant concealed or suppressed a material fact; (2) the defendant was under a duty to disclose the fact to the plaintiff; (3) the defendant intentionally concealed or suppressed the fact with the intent to defraud the plaintiff; that is, the defendant concealed or suppressed the fact for the purpose of inducing the plaintiff to act differently than she would have if she had known the fact; (4) the plaintiff was unaware of the fact and would have acted differently if she had known of the concealed or suppressed fact; (5) and, as a result of the concealment or suppression of the fact, the plaintiff sustained damages. See Nevada Power Co. v. Monsanto Co., 891 F.Supp. 1406, 1415 (D.Nev.1995).

The Mahlums alleged that Dow Chemical fraudulently and intentionally concealed the hazards of liquid silicone after it had "partially assumed" Dow Corning's duty to perform toxicological testing on liquid silicone. As a result, the Mahlums charged Dow Chemical with a duty to disclose publicly the alleged dangers of silicone implants because: it asserted long ago in published articles (e.g., Dr. Rowe's 1948 study, the 1956 Chenoweth study) that silicones as a class were inert; after performing toxicological testing on silicone for Dow Corning, Dow Chemical subsequently learned that certain silicone polymers were not inert; and Dow Chemical possessed superior knowledge about silicone safety yet, according to the Mahlums, it actively and intentionally suppressed this knowledge. The Mahlums also asserted that had Charlotte Mahlum been aware of the fraudulently concealed information, she would not have chosen to undergo the breast implantation surgery that caused her injuries.

Generally, an action in deceit will not lie for nondisclosure. Epperson v. Roloff, 102 Nev. 206, 213, 719 P.2d 799, 803 (1986). For a mere omission to constitute actionable fraud, a plaintiff must first demonstrate that the defendant had a duty to disclose the fact at issue. See Monsanto, 891 F.Supp. at 1417. Here, absent such a duty, Dow Chemical's failure to disclose any information it may have had about the adverse effects of liquid silicone and/or silicone breast implants would not constitute actionable fraud.

With respect to fraudulent concealment, a duty to disclose arises from the relationship of the parties. A fiduciary relationship, for instance, gives rise to a duty of disclosure. See, e.g., Foley v. Morse & Mowbray, 109 Nev. 116, 125-26, 848 P.2d 519, 525 (1993). A duty to disclose may also arise where the parties enjoy a "special relationship," that is, where a party reasonably imparts special confidence in the defendant and the defendant would reasonably know of this confidence. See Mackintosh v. Jack Matthews & Co., 109 Nev. 628, 634-35, 855 P.2d 549, 553 (1993) (citing Mancini v. Gorick, 41 Ohio App.3d 373, 536 N.E.2d 8, 10 (Ohio Ct.App.1987)). A party's superior knowledge thus imposes a duty to speak in certain transactions, depending on the parties' relationship. "Nondisclosure will become the equivalent of fraudulent concealment when it becomes the duty of a person to speak

in order that the party with whom he is dealing may be placed on an equal footing with him." Mackintosh, 109 Nev. at 634-35, 855 P.2d at 553 (quoting Mancini, 536 N.E.2d at 9-10). Even when the parties are dealing at arm's length, a duty to disclose may arise from "the existence of material facts peculiarly within the knowledge of the party sought to be charged and not within the fair and reasonable reach of the other party." Villalon v. Bowen, 70 Nev. 456, 467-68, 273 P.2d 409, 415 (1954) (failure of purported widow to tell the executor of her purported husband's estate that her prior marriage had not been terminated).

The duty to disclose requires, at a minimum, some form of relationship between the parties. See Mackintosh, 109 Nev. at 634-35, 855 P.2d at 553 (disclosure mandated in context of dealings between parties); Villalon, 70 Nev. at 467-68, 273 P.2d at 415 (same); see also In re Temporomandibular Joint (TMJ) Implants Prods. Liab. Litig., 113 F.3d 1484, 1497 (8th Cir.1997) [hereinafter TMJ Implants] (without some kind of relationship, there can be no duty to disclose).

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Absent such a relationship, no duty to disclose arises, and as a result, no liability for fraudulent concealment attaches to the nondisclosing party.

It is undisputed that Dow Chemical did not have a fiduciary relationship, a special relationship, or a relationship of any kind with the Mahlums. Instead, the Mahlums claim that Dow Chemical's duty to disclose arose because it possessed superior knowledge about the dangers of using silicone within the human body. Dow Chemical had no duty to disclose to the Mahlums any superior knowledge it may have had regarding the safety of silicone products, however, because it was not directly involved in the transaction from which this lawsuit arose, or any other transaction with the Mahlums. Accordingly, we conclude that the portion of the judgment holding Dow Chemical liable for fraudulent misrepresentation was not supported by evidence of any relationship between the parties and must be reversed.

D. Accessory Liability

The jury also found that Dow Chemical (1) aided and abetted Dow Corning to engage in fraudulent misrepresentation and (2) acted in concert with Dow Corning to commit fraudulent misrepresentation. 5

The trial court's jury instruction followed section 876 of the Restatement (Second) of Torts. The Restatement provides:

For harm resulting to a third person from the tortious conduct of another, one is subject to liability if he

(a) does a tortious act in concert with the other or pursuant to a common design with him, or

(b) knows that the other's conduct constitutes a breach of duty and gives substantial assistance or encouragement to the other so to conduct himself, or

(c) gives substantial assistance to the other in accomplishing a tortious result and his own conduct, separately considered, constitutes a breach of duty to the third person.

Restatement (Second) of Torts, § 876 (1979) [hereinafter section 876]. Halberstam v. Welch, 705 F.2d 472 (D.C.Cir.1983), explains that subpart (a) of section 876 corresponds to civil conspiracy, and subpart (b) of section 876 corresponds to civil aiding and abetting. Id. at 477. We will review these theories separately. 6

1. Concert of Action

Under the Restatement, liability attaches for concert of action if two persons commit a tort while acting in concert with one another or pursuant to a common design. Section 876(a). The tort of concert of action has traditionally been quite narrow in the scope of its application. The classic application of concert of action is drag racing, where one driver is the cause-in-fact of plaintiff's injury and the fellow racer is also held liable for the injury. Santiago v. Sherwin-Williams Co., 794 F.Supp. 29, 31 (D.Mass.1992), aff'd, 3 F.3d 546 (1st Cir.1993). Similarly, one court remarked that application of the doctrine of concert of action "is largely confined to isolated acts of adolescents in rural society," Halberstam, 705 F.2d at 489, and another court observed that this theory is meant to "deter antisocial or dangerous behavior." Juhl v. Airington, 936 S.W.2d 640, 644 (Tex.1996).

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Concert of action resembles the tort of civil conspiracy. Halberstam, 705 F.2d at 477. "An actionable [civil] conspiracy consists of a combination of two or more persons who, by some concerted action, intend to accomplish an unlawful objective for the purpose of harming another, and damage results from the act or acts." Sutherland v. Gross, 105 Nev. 192, 196, 772 P.2d 1287, 1290 (1989). Civil conspiracy in Nevada differs from concert of action as defined in Section 876 in that civil conspiracy requires that the defendants have an intent to accomplish an unlawful objective for the purpose of harming another, while concert of action merely requires that the defendants commit a tort while acting in concert.

Both causes of action require an agreement. To prevail in a civil conspiracy action, a plaintiff must prove an agreement between the tortfeasors, whether explicit or tacit. See Eikelberger v. Tolotti, 96 Nev. 525, 528 n. 1, 611 P.2d 1086, 1088 n. 1 (1980). Similarly, when section 876 refers to acting in concert with another tortfeasor or pursuant to a common design, it refers to this concept of agreement. See section 876(a), cmt. a; Halberstam, 705 F.2d at 477. Proof of an agreement alone is not sufficient, however, because it is essential that the conduct of each tortfeasor be in itself tortious. Section 876(a), cmts. b & c.

The Mahlums argue that the evidence shows that Dow Chemical had a "tacit understanding" with Dow Corning to engage in tortious conduct, namely, misrepresenting the safety of the silicone used in breast implants, withholding information regarding the adverse consequences of such silicone from physicians and patients, and providing Dow Corning with a global market for its silicone gel breast implants.

Assuming only for purposes of this discussion that Dow Corning did make fraudulent misrepresentations about silicone breast implants, we conclude that the Mahlums did not prove at trial that Dow Chemical acted in concert with Dow Corning by agreeing to commit fraudulent misrepresentation regarding silicone breast implants. The Mahlums failed to prove the existence of an agreement, tacit or otherwise, between Dow Chemical and Dow Corning in which they agreed to commit fraud regarding silicone breast implants, specifically, to make misrepresentations to physicians and patients about the safety of silicone breast implants. Dow Chemical's few public statements about the potential safety of silicone cannot support an inference that Dow Chemical and Dow Corning had an agreement to misrepresent the safety of silicone breast implants. Accordingly, we conclude that the record lacks substantial evidence of Dow Chemical's liability for concerted action to commit fraudulent misrepresentation, and the judgment must therefore be reversed on this cause of action.

2. Aiding and abetting

Under the Restatement, liability attaches for civil aiding and abetting if the defendant substantially assists or encourages another's conduct in breaching a duty to a third person. Section 876(b). The Mahlums had to prove three elements: (1) that Dow Corning committed fraudulent misrepresentation that injured Mahlum; (2) that Dow Chemical was aware of its role in promoting the fraudulent misrepresentation at the time it provided assistance; and (3) that Dow Chemical knowingly and substantially assisted Dow Corning in committing fraudulent misrepresentation. See TMJ Implants, 113 F.3d at 1495; Halberstam, 705 F.2d at 477. The second and third elements should be weighed together, that is, greater evidence supporting the second element requires less evidence of the third element, and vice versa. TMJ Implants, 113 F.3d at 1495.

The Mahlums contend that certain evidence supports the verdict on their aiding and abetting claim. First, they assert that Dow Corning was aware of potential hazards regarding, or at least harbored doubts about, the safety of silicone gel breast implants, and allegedly made misrepresentations about those implants to Charlotte Mahlum. Second, they assert that the jury could infer that Dow Chemical was aware of Dow Corning's alleged misrepresentations because (a) Dow Chemical representatives held four (of ten) seats--and later five (of fifteen) seats--on Dow Corning's Board of Directors; (b) Dow Chemical conducted or supervised some tests

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on silicone substances for Dow Corning as late as 1970; (c) Dow Chemical's chief toxicologist, Dr. V.K. Rowe, maintained a consulting relationship with Dow Corning from the late fifties until the early seventies regarding Dow Corning's design, conduct, or interpretation of studies regarding silicone substances; (d) Dow Chemical and Dow Corning agreed to test the silicones later used in breast implants for use as pharmaceuticals and pesticides; and (e) Dow Chemical, through its subsidiary, Lepetit, marketed Dow Corning breast implants outside the United States. Finally, the Mahlums assert that Dow Chemical's research of the pharmaceutical and pesticidal uses of liquid silicone, and its marketing of breast implants through its subsidiary outside the United States, "emboldened" Dow Corning's alleged fraudulent misrepresentations regarding the safety of silicone gel breast implants.

We conclude that the verdict on the aiding and abetting claim cannot stand. The evidence does not establish that Dow Chemical knowingly and substantially assisted Dow Corning in committing a fraud. Even though, as discussed below in section E, the Mahlums established that Dow Chemical negligently performed its undertaking to test liquid silicone, the evidence that the Mahlums advance falls short of proving that Dow Chemical's actions amounted to knowing support or encouragement of Dow Corning's alleged fraudulent conduct. The difference between the failure of proof regarding aiding and abetting and the adequacy of proof regarding negligent undertaking lies in Dow Chemical's failures to act, rather than its deeds. Here, the proof fails to show the necessary actions that would demonstrate Dow Chemical's knowing participation in Dow Corning's alleged fraud. By contrast, the evidence regarding negligent undertaking is present in the tests and cooperation regarding research that Dow Chemical undertook. In other words, the proof regarding Dow Chemical's research activities does not support

knowing participation in a fraud. The Mahlums thus failed to show that Dow Chemical rendered substantial assistance to allegedly fraudulent misstatements that Dow Corning may have made to Charlotte Mahlum.

The Mahlums argue that if Lepetit had refused to market breast implants without warnings, then Dow Corning would not have been emboldened to continue its supposedly false and misleading representations in the United States. The Mahlums' assertion that Lepetit's lack of protest somehow emboldened Dow Corning, thus providing it with substantial assistance, lacks support in the law. To amount to substantial assistance, such encouragement must take the form of a direct communication, or conduct in close proximity, to the tortfeasor. See Halberstam, 705 F.2d at 481-82 (suggestive words may be enough to create joint liability when they plant the seeds of action and are spoken by a person in an apparent position of authority). The Mahlums failed to prove the existence of direct communication from Dow Chemical to Dow Corning, or close conduct, that could have promoted a fraud. Accordingly, we reverse that portion of the judgment imposing liability on Dow Chemical for aiding and abetting fraudulent misrepresentations. In light of our reversal of the intentional tort claims, we also vacate the district court's award of punitive damages. 7

E. Negligent Performance of an Undertaking

In contrast to the fraud claims, substantial evidence in the record supports the verdict against Dow Chemical with respect to the claim of negligent performance of an undertaking. We therefore conclude that the judgment with respect to this claim must be affirmed. The trial court's jury instruction was consistent with Restatement (Second) of Torts section 324A, which provides as follows:

One who undertakes, gratuitously or for consideration, to render services to another which he should recognize as necessary for the protection of a third person or his things, is subject to liability to the third person for physical harm resulting from

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his failure to exercise reasonable care to perform his undertaking if
(a) his failure to exercise reasonable care increases the risk of such harm or
(b) he has undertaken to perform a duty owed by the other to the third person or
(c) the harm is suffered because of reliance of the other or the third person upon the undertaking.

Restatement (Second) of Torts section 324A (1979) [hereinafter section 324A]. This section reflects the "Good Samaritan" doctrine.

The Mahlums contend that Dow Chemical effectively undertook to test completely and adequately the safety of the liquid silicone used in Dow Corning's breast implants and negligently performed that undertaking. Dow Chemical asserts that it did not undertake to test the safety of Dow Corning's silicone gel breast implants or the liquid silicone used therein. Dow Chemical maintains that the tests it performed for Dow Corning over a thirty-year period were unrelated to breast implants and that the other evidence relied on by the Mahlums to establish liability, such as the services rendered by Dr. Rowe, equally failed to demonstrate an undertaking. We disagree.

As an initial matter, Dow Chemical contends that the Mahlums must demonstrate that Dow Chemical undertook a duty with respect to the specific product (Silastic II breast implants) that caused Charlotte Mahlum's harm. Section 324A, however, includes no such requirement. As the federal district court concluded in In re Silicone Gel Products Liability Litigation, 887 F.Supp. 1455, 1460 (N.D.Ala.1995),

Dow Chemical's reading of [section] 324A is too restrictive. That section provides that one who undertakes services on behalf of another assumes a duty to use due care. The proper focus of the inquiry is whether Dow Chemical undertook to perform services to Dow Corning that Dow Chemical should have recognized were necessary for the protection of third persons. The undertaking creates a duty that would not otherwise exist. Dow Chemical's argument that liability for negligent undertaking can arise only as to a specific final product takes too narrow a view of negligent undertaking analysis. Liability can arise when it is reasonably foreseeable that another will be harmed by the failure to exercise reasonable care in performing such an undertaking.

In addition, Dow Chemical argues that the issue of whether it owed a duty to the Mahlums was improperly submitted to the jury by the district court. According to Dow Chemical, the issue of whether a duty existed in this case was a legal question that should have been resolved by the district court. Although "[t]he 'precise nature and extent' of [an alleged section 324A] duty 'is a question of law ... it depends on the nature and extent of the act undertaken, a question of fact.' " Artiglio v. Corning Inc., 18 Cal.4th 604, 76 Cal.Rptr.2d 479, 957 P.2d 1313, 1318 (Cal.1998) (quoting Smith v. State, 921 P.2d 632, 634 (Alaska 1996)); accord Pratt v. Liberty Mut. Ins. Co., 952 F.2d 667, 671 (2d Cir.1992). At trial, the following evidence pertained to the nature and extent of Dow Chemical's undertaking: (1) Dow Chemical's creation of and fifty percent ownership of Dow Corning, (2) Dow Chemical's control of one-third of Dow Corning's board of directors, (3) Dow Chemical's undisputed expertise in toxicology, (4) Dow Corning's lack of a toxicology laboratory until 1968 and reliance on Dow Chemical's toxicological expertise, 8

(5) the housing of Dow Chemical's and Dow Corning's toxicology laboratories in a Dow Chemical building from 1968 until 1971, (6) the myriad tests performed by Dow Chemical on silicone compounds and the specific tests relating to silicone fluids, (7) the continuing assistance rendered to Dow Corning by Dow Chemical personnel, and (8) Dow Chemical's 1966 joint development agreement, 1969 information development agreement, and 1975 trademark agreement with Dow Corning. Accordingly, we conclude that the type and extent of Dow Chemical's undertaking

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was properly and necessarily submitted to the jury. In other words, the jury was required to consider the nature and scope of Dow Chemical's undertaking so that its concomitant duty, if any, could be determined. See Smith, 921 P.2d at 635.

The record before us reveals substantial evidence from which the jury could determine that Dow Chemical undertook to render services to test the safety of the liquid silicone later used in Dow Corning's breast implants and that Dow Chemical should have recognized those services as necessary for the protection of third persons. Dow Chemical's head toxicologist, Dr. V.K. Rowe, acted as a consultant to Dow Corning on matters concerning silicone toxicology from the late 1940s into the mid 1970s. Documents introduced at trial revealed that Dr. Rowe not only designed the testing protocol for some independent outside laboratories, but also acted as a consultant to Dow Corning's Product Safety Committee in the late 1960s, after Dow Corning introduced its breast implants. Dr. Rowe testified that, in his capacity as an unpaid consultant to Dow Corning, he would render advice on the type of tests Dow Corning should conduct on its silicone substances, interpret the conclusions of such tests, and recommend any additional tests he deemed advisable. Dr. Rowe also attended, on Dow Corning's behalf, meetings regarding product safety with personnel from outside laboratories that contracted with Dow Corning. In 1967, Dr. Rowe was one of the toxicology consultants who advised Dow Corning's Product Safety Committee on breast implant studies performed on dogs. The evidence also suggested that Dr. Rowe indirectly played a role in setting up part of the test protocol for the 1967 dog study.

The evidence also revealed that Dow Chemical and Dow Corning exchanged important personnel between themselves as well as with Lepetit. For example, in 1968, Kenneth Olson transferred from Dow Chemical's toxicology department to Dow Corning to head its new toxicology laboratory. Olson then returned to Dow Chemical in 1973 with the likely knowledge that silicone fluid was used in Dow Corning's silicone gel breast implants. From 1964 to 1966, Charles Hinman, a scientist from the Pitman-Moore division of Dow Chemical, worked for Lepetit as its scientific advisor. While ostensibly a Lepetit employee, Hinman remained on Dow Chemical's payroll. Lastly, R. William Caldwell, a Dow Corning employee, transferred in 1967 to Dow Chemical as its assistant general manager of bioproducts department. Shortly thereafter in 1968, Dow Chemical sent Caldwell to Lepetit, gave him the title of "administratore delegato," and authorized him to buy, sell, and trade Lepetit without prior approval of Lepetit's board. Caldwell testified that he viewed himself a Dow Chemical employee, despite the changes he underwent in employment.

Additionally, various documents chronicle Dow Chemical's testing of Dow Corning's silicone materials from the late 1940s into the mid-1970s. 9 Based on the Chenoweth study, Dow Chemical knew as early as 1956 that the silicone fluid DC 200 (the chemical equivalent of DC 360 fluid used in Dow Corning's breast implants), when injected intramuscularly into rats, migrated throughout the body into major organs, including the brain. The Chenoweth study also specifically recognized that silicone fluids were being studied for medicinal purposes and sought to explore their biological activities. In 1957, Dow Chemical's Dr. Rowe knew that the Miami study involving DC 200 fluid showed that the fluid lowered the granulocytic (immune) elements of the female test subjects' blood. During

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the 1950s and 1960s, Dow Chemical knew that Dow Corning was marketing medical products containing silicones: catheters, brain shunts, heart valves, and drainage valves. 10 Also, in its annual report to stockholders in 1959, Dow Chemical noted that "[b]ecause of their chemical inertness and lack of toxicity, silicones are rapidly finding use in medical research." Thus, Dow Chemical was aware that many of the silicone substances being tested were destined for use in medical devices, including implants.

In 1970, after Dow Chemical began marketing Dow Corning breast implants outside of the United States through its subsidiary Lepetit, Dow Chemical's pathologist Gary Sparschu found that experiments performed on rats injected with DC 360 fluid showed that the fluid had migrated to different parts of the body, including the bone marrow. The female test animals also showed decreased brain weights. Because Dow Chemical knew prior to the 1970s that other silicone materials developed for medical purposes were being used as implants, knew that liquid

silicone was being developed for medicinal uses, and knew at the time of Sparschu's tests that Dow Corning was using liquid silicone in its breast implants, 11 the jury could reasonably infer that Dow Chemical should have known that the services it rendered (e.g., its professional advice and protocol design by Dr. Rowe), the exchange of key personnel to and from Dow Corning, and its toxicological testing of Dow Corning's liquid silicone, were a necessary step in the protection of third persons who would purchase liquid silicone in the form of breast implants. As Justice Mosk of the California Supreme Court explained in Artiglio,

[t]hat Dow Chemical acted without a focus on silicone breast implants does not negate the fact that it acted with a focus on silicone implants. Further, that it acted without awareness of plaintiffs as recipients of silicone breast implants does not negate the fact that it acted with awareness of the general class of persons to which plaintiffs belong, that is, recipients of silicone implants.

Artiglio, 76 Cal.Rptr.2d 479, 957 P.2d at 1323 (Mosk, J., dissenting). Put another way, "[i]f Dow Chemical knew that its testing was being relied upon to develop products that would be implanted in humans, Dow Chemical had a duty to use due care in providing reasonably accurate and complete information even if it did not specifically know in which part of the body the products would be implanted." In re Silicone Gel, 887 F.Supp. at 1461.

Further, based on the evidence before it, the jury could have reasonably determined that Dow Chemical's undertaking went beyond the mere occasional testing of organosilicon compounds for Dow Corning. When Dow Chemical and Corning Incorporated created Dow Corning, they contributed technology and licenses that they held with respect to organosilicon materials. The evidence established that from its inception until the late 1960s, Dow Corning lacked a toxicology laboratory and relied, to a considerable extent, on Dow Chemical to perform necessary testing on the safety of its silicone substances and products. Dr. Rowe testified that in the 1950s, Dow Chemical's toxicology laboratory had a well-respected ranking in the world. Dow Chemical knew that Dow Corning owed a duty to its customers to manufacture and market reasonably safe products. Dow Chemical also knew that Dow Corning lacked a toxicology laboratory until years after Dow Corning began to market breast implants. Additionally, Dow Chemical was aware that Dow Corning heavily relied on the expertise of Dow Chemical's toxicologists, not only to conduct tests on the toxicology of silicone materials from Dow Corning, but also to interpret the test results and to design the testing protocol for outside laboratories with

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whom Dow Corning contracted. 12

Moreover, Dow Chemical entered into several noteworthy agreements with Dow Corning, which further support the conclusion that Dow Chemical undertook to evaluate and test the safety of Dow Corning's liquid silicone. The first was a 1966 joint development agreement "relating to the physiological effects from ingestion or injection into the systems of animals or men of particular physiologically active silicones." By this agreement, Dow Chemical and Dow Corning agreed to "jointly share the costs and ... the profits and losses of any commercialization." The second was a 1969 agreement between Dow Chemical, Dow Corning, and Lepetit pursuant to which the three companies agreed to develop "a body of technical information concerning the biological activity of certain organosilicon compounds." 13 The agreement further noted that "it will be necessary for Dow [Chemical], [Dow Corning], and Lepetit to disclose to one another information in [this area] which is considered to be proprietary and confidential." Neither agreement specifically mentions liquid silicone; nevertheless, as liquid silicone appears to fall within the class of physiologically active silicones and Dow Chemical did amass technical information on liquid silicone compounds, the jury could have reasonably inferred that such compounds fell within the scope of the agreements.

Finally, in 1975, Dow Chemical entered into a trademark and trade name licensing agreement with Dow Corning. Pursuant to this agreement, Dow Chemical agreed to allow Dow Corning to continue using, among other things, the trademark "Dow." This agreement stated that "Dow Company and Corning Company formed [Dow Corning] in 1943 and since then have continuously owned or controlled equally all of the issued share capital of [Dow Corning], and have controlled its operations, including the quality of its goods and services." This language is consistent with licensing requirements under the Lanham Trademark Act of 1946, 15 U.S.C. § 1051, to protect the mark's integrity. If a licensor fails to exercise control over the licensed mark, it may forfeit the mark as abandoned. See generally J. Thomas McCarthy, McCarthy on Trademarks and Unfair Competition, § 17:6, at 17-6 (4th ed.1998). Additionally, courts have concluded that although a trademark licensor has a duty to inspect and maintain the quality of goods sold under a trademark license, this duty cannot result in tort liability. See, e.g., TMJ Implants, 113 F.3d at 1494; Mini Maid Servs. Co. v. Maid Brigade Sys., Inc., 967 F.2d 1516, 1520 (11th Cir.1992). Nevertheless, even though this language in the trademark agreement, by itself, is not sufficient to create tort liability on Dow Chemical's part, we agree with the federal district court that the agreement's "existence is one factor in

assessing Dow Chemical's knowledge and involvement in Dow Corning's breast implant activities." In re Silicone Gel, 887 F.Supp. at 1461.

Based upon the aforementioned evidence, the jury could have found that Dow Chemical undertook to render testing, advisory, laboratory and personnel services for the purpose of promoting the safety of Dow Corning's silicone fluid in order to benefit third persons and had significant control over the development of this fluid.

Because the jury could reasonably conclude that Dow Chemical undertook to completely test the safety of the liquid later used in Dow Corning's silicone breast implants, Dow Chemical had a duty to exercise reasonable care in the performance of this undertaking. See Section 324A. Comment b to section 324A explains that the section "applies

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to any undertaking to render services to another, where the actor's negligent conduct in the manner of performance of his undertaking, or his failure to exercise reasonable care to complete it, or to protect the third person when he discontinues it, results in physical harm to the third person." Thus, under section 324A, once Dow Chemical undertook to test and advise Dow Corning on the safety of liquid silicone, it was obligated to fully complete this course of conduct. Alternatively, if Dow Chemical discontinued its undertaking at some point, it was required to protect Dow Corning's consumers.

Based upon the evidence adduced at trial, the jury was free to conclude that Dow Chemical failed to perform its undertaking with reasonable care, resulting in physical harm to Charlotte Mahlum. See Pratt, 952 F.2d at 671. The Mahlums assert that Dow Chemical negligently performed its undertaking by failing to either conduct further tests to determine the long-term effects of silicones in the human body or at least advise Dow Corning on the need for such studies. We agree and additionally conclude that Dow Chemical was negligent by failing to intervene in the marketing of Dow Corning's breast implants. Thus, we conclude that the evidence supports the jury's finding of negligence.

Under the circumstances, once Dow Chemical undertook to test the safety of Dow Corning's liquid silicone, it was required to fully complete this testing until a reliable safety determination was made. Charlotte Mahlum's expert witness, Dr. Lappe, testified that Dow Chemical did not use reasonable care in designing and conducting follow up studies to confirm or reject results that suggested dangers. The record suggests that Dow Chemical did very little with respect to follow up, long-term testing. Dr. Lappe testified as follows:

My opinion is a very clear and forceful one that whatever long term testing they did do was inadequate. The results were misreported. The findings were suggestive of problems rather than safety. And in the aggregate, there was absolutely no basis for assuming long term safety based on the animal testing.

Given its knowledge about silicones in general and silicone gels in particular through its testing and advising on silicone fluids research over a thirty-year period, its involvement in and knowledge of breast implants through its controlled subsidiary Lepetit, its parent/subsidiary relationship with Dow Corning, including some control over Dow Corning's products and significant control of testing and protocol, one-third control of Dow Corning's board of directors, fifty percent control of Dow Corning's shares, and the control inferred from its various agreements with Dow Corning, Dow Chemical should have used its influence to halt the marketing of Dow Corning's silicone breast implants until the long-term effect of silicone breast implants on humans was understood and these products were determined to be safe. 14

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Furthermore, Dow Chemical could have acted directly under its 1975 trademark and trade name licensing agreement with Dow Corning. The agreement required that products using Dow Chemical's name be "of a nature and quality that is acceptable to Dow Company and shall not damage or reflect adversely on the reputation or goodwill associated with the name and mark 'Dow' " and that Dow Corning, if requested, submit specimens of its products to Dow Chemical and permit inspection of its premises to examine the quality of Dow Corning's products. Additionally, pursuant to this agreement, Dow Chemical preserved the right to withdraw its consent to Dow Corning's use of its name.

Aside from any actual control reflected by this agreement, the agreement gave Dow Chemical authority to revoke Dow Corning's license to use the corporate name "Dow" on any questionable products. As Dow Chemical knew of the risks associated with DC 360, and was aware of specific problems that implant recipients had experienced through its subsidiary Lepetit, Dow Chemical should have exercised its power to revoke Dow Corning's trademark and tradename license with respect to breast implants, if Dow Corning had refused to stop marketing these products.

Finally, given that Dow Chemical knew that much of the extensive and specific information it had of DC 200, DC 360, and other liquid silicones' potential danger was not widely disseminated, it could have also published its knowledge of the potentially hazardous biological effects of liquid silicones. Such publication would have put the medical community on notice of the potentially significant dangers that could result from implantation. Unfortunately, Dow Chemical failed to take any of these actions. Instead, it continued to market Dow Corning breast implants outside of the United States and to reap the financial benefits of Dow Corning's domestic sales. The jury could therefore reasonably conclude from these facts that Dow Chemical negligently performed its undertaking with regard to the safety of the liquid silicone subsequently used in breast implants, as it failed to completely test the silicone liquid for safety and failed to protect the third-party implant recipients.

The jury also had sufficient evidence to conclude that Charlotte Mahlum's physical harm resulted from Dow Chemical's failure to exercise reasonable care. 15 See section 324A (One who undertakes to render services that should be recognized as necessary for a third person's protection "is subject to liability to the third person for physical harm resulting from his failure to exercise reasonable care to perform his undertaking."). As discussed above, the Mahlums introduced expert testimony which tended to prove that Dow Corning's breast implants caused Charlotte Mahlum's illnesses.

Obviously, had Dow Chemical acted to prevent Dow Corning from marketing its breast implants, either through direct influence or its trademark agreement, Charlotte Mahlum would not have suffered injuries from these implants. In addition, testimony at trial included the opinion of Charlotte Mahlum's expert witness, Dr. Lappe, that had Dow Chemical publicized its knowledge of the dangers of liquid silicone to the scientific or medical community, efforts would have been made to stop the use of medical products containing liquid silicones until further tests

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established the safety of such products. Charlotte Mahlum also testified that had she known of the significant health hazard posed by liquid silicones, she would have refused Dow Corning's breast implants.

It was foreseeable that proceeding with the marketing of silicone breast implants and failing to present any information regarding the potential dangers of silicone fluids would result in women electing to receive the implants without a full appreciation of the risks involved. Based upon the evidence adduced at trial, the jury could have found that Dow Chemical had a significant level of control over Dow Corning and its products. Dow Chemical certainly had the authority to influence Dow Corning and to assert direct pressure on Dow Corning through its trademark agreement. Dow Chemical, however, did nothing.

We previously discussed the nature of duty and potential section 324A liability in Wright v. Schum, 105 Nev. 611, 781 P.2d 1142 (1989). Wright recognized that a landlord could be liable, under section 324A, for injuries caused by a dog known to be vicious that escaped from the leased premises through an obviously broken gate. The Wright opinion recognized that "the mere advice or warning by one person to another that care should be taken to avoid a certain risk does not in itself create an undertaking and consequent liability on the part of one giving such advice." 16 Id. at 616, 781 P.2d at 1145. We also emphasized in Wright that the landlord was not liable simply because he was the landlord; instead, the landlord had intended to and did influence the conduct of his tenants by threatening to evict them unless they kept the dog in the house or on a chain. Id. at 616-17, 781 P.2d at 1145. Nevertheless, this court noted that the landlord's status as a landlord created the general liability under section 324A. Id. at 616 n. 2, 781 P.2d at 1145 n. 2. Specifically, since the landlord had the power to enforce his demand that the tenant take care of the dog, and used this power, he undertook a duty to exercise due care and could be found liable for his breach of this duty. Id. at 617, 781 P.2d at 1145-46.

Here, as in Wright, Dow Chemical's duty and resulting liability is not based solely on its status as a parent corporation. By virtue of its status as a creator parent, however, Dow Chemical had a degree of power over Dow Corning. As has been previously mentioned, Dow Chemical maintained fifty percent ownership of Dow Corning's stock and one-third control of Dow Corning's board of directors. Dow Chemical also tested and advised Dow Corning on its silicone products for several decades. During most of this time, Dow Corning lacked its own toxicology lab, and Dow Corning's Bioscience Research Department was located within the same building as Dow Chemical's toxicology and research laboratories from 1965 until 1970. Dow Chemical designed testing protocol and exercised influence in the area of toxicology, and, over the years, Dow Chemical freely transferred its employees to and from Dow Corning. Further, Dow Chemical entered into a 1966 joint development agreement, a 1969 information development agreement, and a 1975 trademark agreement with Dow Corning. These agreements could support a finding by the jury that Dow Chemical was exercising actual control over the development of information and silicone products. The record is also replete with examples of Dow Corning following Dow Chemical's lead; in fact, our review of the record discloses no instance when Dow Corning failed to act in accordance with Dow

Chemical's instruction. Consequently, we conclude that substantial evidence of Dow Chemical's control over Dow Corning, as required by Wright, was presented to the jury. 17

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As a last requirement under section 324A, the Mahlums needed to show one of three things: (a) that Dow Chemical's negligence increased the harm to them, (b) that Dow Chemical undertook a duty owed by Dow Corning to them, or (c) that either Dow Corning or they relied on Dow Chemical's undertaking. 18 We conclude that, based upon the evidence discussed above, the jury could conclude that Dow Chemical undertook at least part of the duty, owed to the Mahlums by Dow Corning, to reasonably ensure the safety of breast implants. Additionally, substantial evidence supports a determination that Dow Corning relied on Dow Chemical to inform it not only of the significance of findings such as silicone migration, but also to inform it of what additional tests or studies were required based upon such findings. Because Dow Corning lacked a toxicology department until 1968, six years after Dow Corning began to sell breast implants, the jury reasonably could have found that Dow Chemical undertook part of Dow Corning's duty to its customers, and that Dow Corning relied on Dow Chemical's tests and expertise in developing its silicone breast implants. Thus, we conclude that liability under subsections (b) and (c) of section 324A is supported by substantial evidence in the record.

In sum, the record includes substantial evidence on which a reasonable jury could find that Dow Chemical was liable under section 324A for negligently undertaking its duty to completely test the safety of liquid silicone later used in breast implants and/or to warn recipients of the risks involved with these implants. Consequently, the judgment is affirmed on this cause of action.

F. New Trial Issues

Dow Chemical also appeals from a number of rulings that purportedly require us to remand this case to the district court

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for a new trial. A new trial may be granted for: (1) irregularity in the proceedings of the court, jury, master, or adverse party, or any order of the court, or master, or abuse of discretion by which either party was prevented from having a fair trial; (2) misconduct of the jury or prevailing party; (3) accident or surprise which ordinary prudence could not have guarded against; (4) newly discovered evidence material for the party making the motion which he could not, with reasonable diligence, have discovered and produced at the trial; (5) manifest disregard by the jury of the instructions of the court; (6) excessive damages appearing to have been given under the influence of passion or prejudice; or, (7) error in law occurring at the trial and objected to by the party making the motion. NRCP 59(a). The standard of review for granting or denying a motion for a new trial is abuse of discretion. See Hazelwood v. Harrah's, 109 Nev. 1005, 1010, 862 P.2d 1189, 1192 (1993).

Dow Chemical cites numerous issues for which it argues it deserves a new trial: (1) whether the district court erred in allowing Dr. Lappe to testify concerning Dow Chemical's legal duties; (2) whether the district court erred in admitting evidence concerning silicones that are not contained in breast implants and in excluding evidence of the safe uses of silicones; (3) whether admission of a memorandum concerning the fatal effect of silicone on cockroaches constituted reversible error; (4) whether the district court erred in admitting the joint defense agreement between Dow Chemical and Dow Corning; (5) whether the district court erred in admitting evidence of a 1984 jury verdict against Dow Corning; (6) whether the district court erred in admitting internal Dow Corning documents that Dow Chemical had never seen; (7) whether evidence regarding Dow Chemical's subsidiary, Lepetit, should have been excluded; (8) whether it was reversible error for the court to exclude evidence concerning Dow Chemical's profits or lack thereof from the sale of breast implants; (9) whether the district court erred in striking Dow Chemical's deposition designations; (10) whether the Mahlums' trial counsel engaged in misconduct; (11) whether the district court improperly deprived Dow Chemical of its right to the counsel of its choice; and (12) whether the district court erred in instructing the jury. Dow Chemical also contends that the compensatory damages were excessive. Five issues are more troubling than the others and merit discussion below. The balance of the issues not discussed here are rejected as moot or lacking merit.

Dow Chemical maintains that the district court erred by introducing into evidence a 1984 jury verdict of fraud against Dow Corning in a breast implant case (the Stern verdict). The Mahlums argue that this evidence was relevant for notice because in 1984, one year before Mahlum received her breast implants, Dow Chemical, through its representation on the Dow Corning Board of Directors, received notice of the harmful effects of silicone breast implants and did nothing. Although Dow Chemical argues that the Mahlums' notice theory is inconsistent with its fraudulent concealment claim (because fraud is an intentional act), we conclude that mere inconsistency should not render mention of the Stern verdict inadmissible. Mention of the Stern verdict was fairly brief, and was offered to

prove notice rather than to convince the jury that it should render a similar verdict. Admitting a prior verdict as evidence, however, is a practice that we condemn as generally highly prejudicial. A district judge who admits such evidence risks reversal under NRS 48.035. But in this particular instance, we are not convinced that unfair prejudice outweighed the probative value of a few brief references to the Stern verdict at this trial. We therefore conclude that mention of the Stern verdict is not a sufficient basis for remanding this case for a new trial.

In addition, Dow Chemical sought unsuccessfully to introduce evidence of the safe uses of polydimethylsiloxane silicones used in such devices as hydrocephalic brain shunts and heart valves. Dow Chemical maintains that the jury was thus prevented from hearing deposition evidence concerning the safe and beneficial uses of silicone in medical applications. The district court excluded Dow Chemical's deposition designations

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as untimely under the court's pretrial orders. At trial, the district court permitted Dow Chemical the opportunity to admit some of the previously excluded evidence where Dow Chemical could show that such evidence was critical to its defense. We conclude that the district court acted within its discretion in excluding the designations as untimely. See NRCP 16(b); NRCP 37(b)(2)(B); Kelly Broadcasting v. Sovereign Broadcast, 96 Nev. 188, 192, 606 P.2d 1089, 1092 (1980).

Further, Dow Chemical attempted to exclude evidence of tests purporting to show the toxicity of silicone compounds other than those used in Dow Corning's breast implants. The district court admitted this evidence on the ground that it was relevant to the Mahlums' aiding and abetting and conspiracy claims. According to the Mahlums, this evidence is relevant because the two companies' cooperation in testing silicone compounds shows the close relationship between them. The decision to admit or exclude relevant evidence, after balancing the prejudicial effect against the probative value, is within the sound discretion of the trial judge, and the trial court's determination will not be overturned absent manifest error or abuse of discretion. See NRS 48.035; K-Mart Corporation v. Washington, 109 Nev. 1180, 1186, 866 P.2d 274, 278 (1993). Evidence of such silicone compounds was material to the elements of the claims of accessory liability. Admission of the evidence regarding silicone compounds was therefore properly within the discretion of the district court.

Dow Chemical also assigns as error the district court's decision to admit a joint defense agreement between Dow Corning and Dow Chemical. Dow Chemical sought a motion in limine to exclude any reference to a 1992 joint defense agreement between Dow Corning and Dow Chemical concerning any silicone breast implant litigation. One of Dow Chemical's attorneys, during the cross-examination of the Mahlums' witnesses, stated that it was a Dow Corning attorney who had conducted the witness' deposition. Because this remark by Dow Chemical "opened the door," the district court admitted the joint defense agreement into evidence. Dow Chemical argues that the jury could easily misconstrue the significance of the joint defense agreement and conclude that it was jointly responsible for any breast implant injuries. Dow Chemical also contends that the district court erred in not offering a limiting instruction that would have informed the jurors that they were not to draw any negative inferences from the joint defense agreement. We conclude that the district court erred in admitting the joint defense agreement based on a passing reference to Dow Corning's participation in the earlier stages of this case. Although the admission of the joint defense agreement was unjustified, we conclude that its admission was harmless error, see NRCP 61, and not a sufficient basis for remanding this case for a new trial, because it was apparent at trial that Dow Corning had participated in earlier stages of the litigation and that Dow Corning's and Dow Chemical's interests were related.

Dow Chemical contends that the district court erred in refusing to allow two Dow Corning attorneys, who were not members of the Nevada bar, to represent Dow Chemical at trial pro hac vice. The district court refused to permit them to represent Dow Chemical because their proposed representation of Dow Chemical would conflict with their duties to Dow Corning. A district court has inherent power to enjoin an attorney from representing conflicting interests. Boyd v. Second Judicial District Court, 51 Nev. 264, 268, 274 P. 7, 8 (1929). When a district court must decide whether an attorney's conflicts of interest should preclude representation, any doubt should be resolved in favor of disqualification. See Cronin v. District Court, 105 Nev. 635, 640, 781 P.2d 1150, 1153 (1989).

Dow Chemical had filed a cross-claim against Dow Corning; hence, the interests of the two companies were plainly adverse. Shortly before trial, citing the conflict of interest with Dow Corning, the district court denied Dow Chemical's request to designate two attorneys, Nancy Lawson and John Donley, who had formerly represented Dow Corning in breast implant litigation. Dow Chemical failed to inform the court in timely fashion that Dow Corning had granted permission

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to permit Ms. Lawson to represent Dow Chemical, in a letter dated May 24, 1995. 19 (It appears that Dow Corning did not specifically consent to have Mr. Donley represent Dow Chemical at trial.) Dow Chemical apparently did not

submit the letter waiving the conflict to the court until September 29, 1995, the same day that the court ruled that Nancy Lawson could not serve as Dow Chemical's counsel because of the conflict of interest.

Dow Chemical maintains the district court abused its discretion in denying Dow Chemical its counsel of choice. According to Dow Chemical, it was severely prejudiced at trial by relying on counsel that were substantially less well prepared for certain critical tasks than its attorneys of record. The Mahlums argue that both attorneys had conflicts of interest and that neither of them produced timely proper evidence of Dow Corning's consent to dual representation.

While Dow Chemical had a letter from Dow Corning waiving any conflict that might arise from Ms. Lawson's representation of Dow Chemical at trial, Dow Chemical did not present that waiver to the court in a timely fashion, and apparently presented no waiver regarding Mr. Donley. Under these circumstances, the district court did not abuse its discretion in refusing to permit the Dow Corning attorneys to represent Dow Chemical at trial.

IV. Conclusion

In conclusion, we reverse the district court's judgment on the claims of fraudulent concealment, concert of action, and aiding and abetting. Consequently, we also vacate the award of punitive damages. We affirm the judgment on the claim of negligent undertaking, and we affirm the district court's order denying Dow Chemical's motion for a new trial.

AMES, D.J., 1 concurring.

I concur in the opinion's analysis and result except that I do not believe the trademark agreement has much, if any, probative value in determining Dow Chemical's negligent undertaking liability.

SPRINGER, C.J., concurring in part and dissenting in part.

I concur in the court's opinion affirming the trial court's judgment on the negligent undertaking claim; but I dissent to the court's reversal of the punitive damage awards. 1

Unlike my colleagues, I see this case as a case in which there is sufficient proof of implied malice for the jury to award punitive damages.

Punitive damages may be awarded where a defendant is guilty of malice. See NRS

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42.005(1). Malice may be express or implied. Id. Express malice is present when a defendant "intended to injure a person." NRS 42.001(3); see also Clark v. Lubritz, 113 Nev. 1089, 1099, 944 P.2d 861, 867 (1997). Implied malice is present where a defendant is guilty of "despicable conduct which is engaged in with a conscious disregard of the rights or safety of others." NRS 42.001(3); Lubritz, 113 Nev. at 1099, 944 P.2d at 867. The jury rendered a special verdict that Dow Chemical had acted "with conscious disregard of the safety of others." I see no reason for interfering with the jury's special verdict and would, on the basis of that verdict, affirm the punitive damage judgment.

NRS 42.001(1) defines conscious disregard as having "knowledge of the probable harmful consequences of a wrongful act and a willful and deliberate failure to act to avoid those consequences." The special verdict finding that Dow Chemical was guilty of consciously disregarding the safety of Mrs. Mahlum, and others like her, in my view, is all that is necessary to support the punitive damage award in this case. In addition to finding the requisite conscious disregard, the jury filled out its special verdict with findings that Dow Chemical was actually aware of the danger posed by the breast implant (the danger, I would propose, that was created when Dow Chemical "work[ed] together in a joint development program" with Dow Corning, under the agreement in which Dow Chemical and Dow Corning "developed ... a body of technical information concerning the biological activity of certain organosilicon compounds.") 2 In addition to finding that Dow Chemical was "aware of the probable dangerous consequences of its conduct," the jury also specifically concluded that Dow Chemical "willfully and deliberately failed to avoid" the dangerous consequences of silicone breast implantation. Put another way, the jury believed that Dow Chemical and Dow Corning, joint developers of the breast implant marketed by Dow Corning, were aware of what they were doing and acted in conscious disregard of the "dangerous consequences" inherent in placing silicone in the human body in the Dow Corning Silastic II.

In its brief, Dow Chemical's first response to the damning consequences of the special verdict is that there is "no evidence that Dow Chemical knew that breast implants were likely to be dangerous." (Emphasis in Dow Chemical's brief.) Dow Chemical's second argument is that there is not "any basis for the plaintiff's claim that it willfully and deliberately breached a duty to stop Dow Corning from selling breast implants."

With regard to the first argument, it appears to me that there is quite a bit of evidence from which the jury could have concluded that Dow Chemical "knew" that breast implants were likely to be dangerous. The overriding answer to Dow Chemical's contention is that by virtue of such Dow Chemical-Dow Corning arrangements as their "joint development program," their "joint research agreement," their mutual "obligation of confidence and nonuse"

(relating to the biological activity of silicones) and, especially, the joint testing of miniature breast implants in dogs, whatever Dow Corning knew about the dangers of biological uses of silicone, Dow Chemical probably knew of the dangers, as did Dow Corning. It is plain that the two Dow companies had been working together for years on the use of silicones for medical purposes and that in later years they worked together on the development of breast implants.

I give special significance to Dow Chemical's declaration of its control over Dow Corning in its agreement with Dow Corning, dated May 5, 1975. In this written document, Dow Chemical and Dow Corning concur in the understanding that from the time

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Dow Corning was formed in 1943, Dow Chemical and Corning Corporation had "controlled equally" the share capital of what Dow Chemical calls its "Associate Company" namely, Dow Corning, and that, since that time, Dow Chemical and Corning Corporation have "controlled its [Dow Corning's] operations, including the quality of its goods and services. " (Emphasis added.) Although Dow Chemical may argue in its brief "that there was no evidence that Dow Chemical knew that Dow Corning was misrepresenting the safety of its products," it seems to me that if Dow Chemical had been controlling Dow Corning's operations, as it says it was, and was controlling the quality of its goods and services, it is hard for Dow Chemical to argue that it did not know that Dow Corning was misrepresenting the safety of the Silastic II.

There is other evidence (other than Dow Chemical's declaration that it had control over the operation of Dow Corning and the quality of its products) that Dow Chemical knew that silicone breast implants were potentially dangerous and that Dow Corning was "misrepresenting the safety" of this product. 3 Actually, given the state of this record, it is a very difficult task for Dow Chemical to deny that it did not know about the dangerous potential inherent in placing the Silastic II silicone gel into the human body. Dr. Marc Alan Lappe, toxicologist, medical ethician and expert in the field of silicone chemistry, testified that Dow Chemical possessed the "key findings of adverse effects of the components of Dow Corning's silicone based breast implants." Dr. Lappe pointed out that although Dow Chemical had knowledge about such things as the migration of silicone throughout the body and silicone's ability to "bleed" out of its elastomer shell, Dow Chemical "did not report the studies that would demonstrate what the toxicologic properties were of the known components of silicone gel." Dr. Lappe went so far as to testify that if Dow Chemical had disclosed the details of the Dow Chemical "research program into ... how polydimethylsiloxanes used in implants had effects on the immune and central nervous system, ... the implants would have been taken off the market long before 1992."

As further evidence of Dow Chemical's knowledge and its joint role in a number of experiments relating to the principal component of breast implants, the DC 360 silicone fluid, Dow Chemical admits, as put in its opening brief, that "Dow Chemical tested or participated in tests involving DC 360 fluid, which was later used ... to make the gel in Silastic II implants." Dow Chemical also admits in its brief that it "conducted or participated in approximately ten tests on DC 200 fluid, which is an industrial silicone fluid that is chemically similar to the DC 360 fluid" that was used in Mrs. Mahlum's implants. Dow Chemical appears to be arguing that even though it tested the silicone fluids that were later used in the implants, it did not do so for the specific "purpose of determining whether it was safe for use in a medical implant." It is hard for Dow Chemical to maintain such a position given its admission that it "tested or participated in tests involving DC 360 fluid." Dr. Lappe testified that DC 360 was used as the major component in the 1970 "miniature breast implants" test in dogs and that the implant experimenters were "following an outline that had been laid out by Dow Chemical and sent to FDRL, to Dr. Carson." (See page 8.) The record belies Dow Chemical's assertion that it did not test components of Silastic II (namely, DC 360 and similar organosilicon compounds) for the purpose of determining the safety of these components for use as medical implants. As I see it, whatever responsibility that Dow Corning might have for employing DC 360 in medical implants must be shared with Dow Chemical, there is evidence to support a jury finding that Dow Chemical should share that responsibility, perhaps equally, with Dow Corning.

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From the tests that Dow Chemical "conducted or participated in," Dow Chemical was likely to have known, at the very least, that the mentioned silicone liquids, when introduced into the bodies of mammals, migrated throughout the bodies of the test animals. (See, e.g., 1956 study by Dr. M.B. Chenoweth of Dow Chemical's biochemistry department.)

As I have said, Dow Chemical's position seems to be that although it safety-tested the principal component of breast implants, it did not test silicone implants as such. To this contention I say that, even without considering the Dow Chemical-designed experiment with miniature breast implants, the evidence seems to show that Dow Chemical and Dow Corning jointly "participated" in the development and safety-testing of a substance designed to be placed

within the human body and that the two companies should share in responsibility for the adverse consequences associated with placing the substance within the human body.

I see as the gist of the Mahlums' claim against Dow Chemical the two Dow companies' having "participated" and worked together 4 in developing and testing a form of silicone that was intended by both companies to be placed inside the human body. Whether one wants to say that the two companies are jointly liable for carrying out this activity or to say that Dow Chemical "undertook" the task of assisting Dow Corning in doing so, the facts support a conclusion that both Dow Corning and Dow Chemical had a duty to Mrs. Mahlum and other intended users of DC 360 to insure that the substance could be used safely for its intended internal-implantation purpose or, at least, a duty to warn of the dangers which were known to both Dow Chemical and Dow Corning.

In its opening brief, Dow Chemical argues: "Dow Chemical never specifically undertook to render any advice with respect to the safety or suitability of silicones for use in breast implants and therefore cannot be liable for its alleged failure to recommend long-term testing." The record, and particularly the testimony of Dr. Lappe, repels this assertion. The miniature breast implant study alone tells us that Dow Chemical not only rendered "advice" in this testing, Dow Chemical people designed and supervised these medical tests, tests that can only be described as breast implant tests.

From at least the time of the Chenoweth Study in 1956, we know from Dr. Lappe that Dow Chemical and Dow Corning were investigating together the biological reactivity of certain kinds of silicones and were working toward the "increasing use of siloxanes for medicinal application." (Emphasis added.) From the time of the Chenoweth Study, both companies were aware that when these silicone compounds were injected into a mammalian body they migrated throughout the body, with injury being done to a number of organic systems. The jury knew, then, that the two companies were involved in more than just "basic research," that they were jointly testing chemicals for a "particular purpose," that purpose most likely being to determine whether DC 360 could be safely used medically within the human body. The issue here, then, is not the Mahlums' seeking to hold Dow Chemical liable for faulty, basic research on silicone products. The Mahlums, on the state of this record, can credibly charge Dow Chemical with actively collaborating with Dow Corning and participating with Dow Corning in the research and development of DC 360, not only for general, internal medical uses, but for the specific use in breast implants, as evidenced by the miniature breast implants which were the subject of the Dow Chemical-Dow Corning, four-dog study. This study was completed in 1970, using miniature silicone gel breast implants. Four dogs were examined after six months and twenty-four months from the time of implantation. One of the dogs died after eleven months, from causes not related

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to the experiment. This dog, on autopsy, exhibited evidence of liver and kidney congestion and some fibrous tissue reaction at all of the sites of implantation. With reference to the three surviving dogs, after twenty-four months, almost all of the implantation sites had severe or moderate chronic inflammation. A report of the study, co-authored by Silas Braley of Dow Corning, was published in 1973. According to Dr. Lappe, the report falsely told the "scientific community there were no differences at six months and two years and provide[d] only six month's data." Dr. Lappe testified that the Braley Report does not give the scientific community a chance to perform an independent evaluation of the two-year data and falsely represents that the results were the same at six months and twenty-four months. Further, the report failed to say that one of the dogs had died (stating that all four had survived) and did not report the adverse reactions appearing in the autopsy report of the dog that had died.

According to Dr. Lappe, there was another study done by Dow Chemical Company on DC 360 fluid in 1970. This study contains a pathology report of what happens when DC 360 fluid is injected into rats. Dr. Lappe was asked: "What [did] Dow Chemical find out about silicone and where it goes in bone marrow in 1970, sir?" His answer:

[T]he test animals developed vacuolizations which were evidence to them of the presence of silicone in the bone marrow. That is where blood products are produced, the cells of blood are produced primarily in the bone marrow. They also found evidence of lung congestion and evidence of involvement of the liver.

The experiment also found a statistical difference in brain weight in the experimental animals. Dr. Lappe considered it to be significant that this was a Dow Chemical Company internal company report and that, according to Dr. Lappe, it was not filed with the FDA or shared with the scientific community. Dr. Lappe also testified that Dow Corning published a report in its own name that "reads word for word identical" to the Dow Chemical report referred to. All reference to Dow Chemical was deleted in the second, identically-worded Dow Corning report.

Dr. Lappe further testified about two 1973 pathology studies conducted by Dow Chemical "on various silicone implant specimens [involving] tissue specimens taken from rabbits that have been either control or were treated with

Dow Corning materials." Experimenters, according to Dr. Lappe, "all [found] evidence of chronic inflammatory reaction characterized by what are called multinucleated giant cells in this particular study."

All of Dr. Lappe's testimony is very much in line with a "joint development agreement" made by Dow Chemical and Dow Corning in 1967. This agreement, both a "joint research agreement" and a "joint development agreement," pertained to "DC 555 and compounds derived from and related thereto." The subject of the Dow Chemical-Dow Corning agreement was "the physiological effects resulting from the ingestion or injection into the systems of animals or men of particular physiologically active silicones, wherein in principle, the parties shall jointly share the costs and shall share the profits and losses of any commercialization." Minutes of a Dow Chemical board of directors' meeting referred to an October 1, 1966, agreement between Dow Corning and Dow Chemical for the "research and commercial development in the field of physiological effects of certain organosilicon compounds," which Dr. Lappe takes to be referring to the determination by these two companies of "whether or not the compounds, like DC 360 or 200 or 555, would have an effect that would perturb or upset or enhance the human body's basic physiological or metabolic life sustaining activities."

Also put into evidence were the March 1977 minutes of the annual meeting of stockholders of Dow Corning. The minutes contain a document entitled "Dow Chemical Company Evaluation of Bioactive Organosilicon Compounds." There can be no denying of Dow Chemical's ongoing interest in silicone research for medical purposes. In 1969, the two Dow companies signed an agreement to work together in a "joint development program" relating to the "biological activity of certain organosilicon compounds," in which the two companies agreed to "maintain

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such information in confidence" and neither would use the results for its own commercial purposes. All in all, there would seem to be an abundance of evidence to support a jury finding that Dow Chemical "knew that breast implants were likely to be dangerous."

Dow Chemical's second argument is that there is no evidence that it "willfully and deliberately breached a duty to stop Dow Corning from selling breast implants."

I find this to be a very interesting and revealing contention. Dow Chemical seems to be saying that even if it did know that the breast implants were "likely to be dangerous," it would not be liable to users of the device because it was under no duty "to stop Dow Corning from selling breast implants." The way Dow Chemical puts this argument goes to the very heart of its defense, which is: "We are merely a stockholder in Dow Corning; and, if Dow Corning decided to develop and market a dangerous product, we had no duty to stop them and, for that matter, did not have the power to stop Dow Corning if we so chose." If Dow Chemical had neither the duty nor the right to "stop" Dow Corning "from selling implants," Dow Chemical could not be guilty for any misconduct engaged in by Dow Corning. The problem with Dow Chemical's argument, however, is that it fails to recognize that the jury could have found what might be said to be the real relationship between Dow Chemical and Dow Corning, which is that Dow Chemical "operated," "controlled," assisted and otherwise "jointly" worked with Dow Corning in the development and probably the marketing of this potentially dangerous product. Once this is recognized, the jury could have concluded that it makes just as much sense to say that Dow Corning "failed to stop" Dow Chemical as it does to say that Dow Chemical failed to stop Dow Corning. Again, Dow Chemical cannot rely on its "We-are-just-a-stockholder" defense. There is much more to it. Sure, if Dow Chemical were only a stockholder, it would have no duty, no right to "stop" Dow Corning from doing the things that it did; but the jury could, from this evidence, have found that Dow Chemical acted in a role that went far beyond just being a stockholder.

If the jury believed the evidence bearing on Dow Chemical's control over "the quality of [Dow Corning's] goods and services" and Dow Chemical's operation of Dow Corning, then it is not too large a step for the jury to have found that both companies had "act[ed] with conscious disregard of the safety" of Mrs. Mahlum.

Witness Dr. Marc Lappe gave powerful affirmation to the Mahlums' punitive damage case when he testified with a "strong and decisive yes" that Dow Chemical had "demonstrated conscious disregard for the safety and welfare of the ultimate users of products that it had direct or indirect control over." Dr. Lappe testified that

for a protracted period extending up to the time of Miss Mahlum's implant, Dow Chemical by its own actions initiated control over toxicology testing in the '50s and '60s that would be done on components of Dow Corning breast implants. Thereafter, ... they [Dow Chemical] participated in selecting for the test labs, they knew and referred Dow Corning to the proper testing individuals in their view.

Most persuasive to me is Dr. Lappe's testimony that "Dow Chemical had and did exercise control over what went into these external tests by actually designing the test for Dow Corning of what a toxicological assay would look like." (Citing the "specific test that moved [Dr. Lappe] the most," namely, a test laid out by Dow Chemical, in which "the analog of a breast implant," "miniature breast implants" were placed experimentally in dogs.)

Dr. Lappe's testimony is very much in harmony with the previously quoted language in the Dow Chemical-Dow Corning agreement of May 5, 1975, stating that Dow Chemical had control of Dow Corning's operations, "including the quality of its [Dow Corning's] goods and services." It seems to me that the jury had sufficient evidence to conclude that Dow Chemical and Dow Corning have been in the silicone research business together for many years and that one of the products of their "joint research" was the Silastic II. It is difficult, then, to give

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much credence to the argument in Dow Chemical's brief that "it had no knowledge of any dangers associated with silicone gel breast implants." With regard to Dow Chemical's argument that it "did not willfully and deliberately breach[ ] a duty to stop Dow Corning from selling breast implants," the argument is misplaced. It continues to assume that Dow Chemical is only a stockholder and that it, therefore, has no duty to "stop" Dow Corning's illicit activities. The jury, as I have pointed out, could very well have found that Dow Chemical and Dow Corning shared a general duty to stop "selling breast implants" or, rather, not to sell them at all until proper testing had been done.

As I see Dr. Lappe's testimony, it has the value of being both opinion evidence and percipient evidence. Dr. Lappe gave his opinion, "based on all the evidence available to me," 5 that Dow Chemical was guilty of a conscious disregard of Mrs. Mahlum's safety and welfare. The Dow Chemical brief is devoted to the inadmissibility of Dr. Lappe's testimony as to "due care" but says little or nothing about his "conscious disregard" testimony. Dr. Lappe qualified as an expert in the field of medical ethics, and I find nothing in Dow Chemical's arguments that would lead me to disregard Dr. Lappe's testimony or to say that it had not been properly considered by the jury.

Dr. Lappe gave testimony, based on his "understanding and knowledge of the standards for animal testing," to the effect that Dow Chemical did not conduct the studies that it did do "with an end in mind of protecting the public or use reasonable care in the design and conduct of follow-up studies to assure that results that suggested adverse finding could be confirmed or rejected." Even if the opinion portion of Dr. Lappe's testimony were to be rejected, Dr. Lappe provided supporting factual testimony for his opinion, testifying, without objection, that Dow Chemical had "concealed the hazards of the silicone fluids that went into silicone gel breast implants." There is no reason why the jury could not have properly concluded from this evidence that Dow Chemical did, in fact, conceal known dangers of silicone breast implants from persons whom Dow Chemical knew were going to be using the dangerous product. From the conclusion that Dow Chemical was concealing known dangers, the jury could reasonably have concluded from the facts of this case that Dow Chemical did so "willfully and deliberately" and, hence, in "conscious disregard of the safety of others."

The only remaining subject that calls for discussion is identification of the legal rubric that should be applied to cases in which a jury makes a specific finding that implied malice is present by reason of proof of a conscious disregard of the safety of others. A number of theories of liability may be properly applied to this case. The majority has affirmed the trial court's judgment that Dow Chemical negligently performed its undertaking to assist Dow Chemical in researching the safety of breast implants and advising Dow Corning with respect to the safety of its product. When we consider this tort liability in connection with the jury's having concluded, by clear and convincing evidence, that Dow Chemical is guilty of implied malice, conscious disregard of Mrs. Mahlum's safety, we need go no further. We have tortious conduct on the part of Dow Chemical coupled with the requisites of implied malice. As I see it, this, by itself, supports a jury finding that Mrs. Mahlum is entitled to recover punitive and exemplary damages.

I would also note that plaintiffs have judgment in this case on the basis of Dow Chemical's having fraudulently concealed from Mrs. Mahlum and other breast implant recipients the dangerousness of this product. Judgment was entered on two bases: Dow Chemical's having aided and abetted Dow Corning's fraudulent misrepresentations and Dow Chemical's having acted in concert with Dow Corning in concealing the dangers.

I recognize, as maintained by Dow Chemical in its briefs, that Nevada has not recognized either concert of action or aiding and

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abetting as tort actions. This should not prevent this court from recognizing these torts in a case like this, where Dow Chemical controlled Dow Corning and worked hand-in-hand with Dow Corning in developing and marketing the Silastic II. Acting in concert is, to me, the clearer of the two actions because the jury could have believed that Dow Chemical was more of a principal than it was an aider and abettor. My own view is that the jury would have been entitled from the evidence submitted to it to decide that Dow Chemical was more culpable than Dow Corning, that Dow Corning was actually a relatively innocent agent of Dow Chemical, which directed and controlled the whole breast implant "operation." One does not have to go that far, however, to justify the jury's verdict and the punitive damage award against Dow Chemical. All persons who received these implants were owed the duty to be informed

that they were subject to the dangers that were inherent in the product that was designed, produced and marketed at the very least through the collaboration of the two Dow companies. Dow Chemical and Dow Corning shared a duty and responsibility to Mrs. Mahlum not to allow a dangerous product to be put into her body or, at the very least, to warn Mrs. Mahlum of the dangerousness of the product. Both Dow Chemical and Dow Corning are liable to Mrs. Mahlum for fraudulent concealment.

Although the jury's finding that Dow Chemical aided and abetted Dow Corning is not so substantial a case as its finding that the two companies acted in concert, I do not believe that the aiding and abetting judgment should be set aside. I see no reason why the jury in this case could not have found that Dow Chemical aided and abetted Dow Corning (although it is more likely that Dow Corning aided and abetted Dow Chemical in Dow Chemical's rush to corner the market in breast implants without conducting the proper human and animal epidemiological studies). 6

Dow Chemical argues in its brief that the aiding and abetting and the concert of action instructions "effectively allowed the jury to find Dow Chemical liable for fraud for failing to supervise Dow Corning's breast implant business." This to me is a very hollow argument and is based, again, on Dow Chemical's trying to convince this court that its only connection to "Dow Corning's breast implant business" was that it was just a stockholder. That Dow Chemical had a much larger role in the breast implant story than just as a stockholder in Dow Corning should be apparent to any reader of this record.

I understand that the jury denied liability on the civil conspiracy claim; but this does not mean that the two companies were not acting with one another to bring about a preconceived result, namely, to gain by marketing a product that was known to be dangerous or by marketing a product without

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adequately apprising its prospective users of the dangers inherent in the product's use.

I would have no hesitancy in affirming all of the trial court's judgments.

MAUPIN, J., with whom SHEARING, J., joins, concurring in part and dissenting in part.

I join that part of the court's opinion reversing the Mahlums' intentional tort claims, but I would reverse the judgment in its entirety. I therefore dissent from the majority's decision to affirm the Mahlums' negligent undertaking claim.

As the majority notes, Dow Chemical and Corning Incorporated formed Dow Corning in 1943 to explore, develop, and undoubtedly, profit from silicone technology. From its inception, Dow Corning has maintained an impenetrable, separate corporate identity from its two parent corporations, such that the Mahlums abandoned any attempt to "pierce" the corporate veil dividing Dow Corning from Dow Chemical (at least as that term is used in the traditional sense).

Precluded from pursuing claims against Dow Chemical based on derivative liability, the Mahlums sought to establish that Dow Chemical, by its own actions, was responsible for the injuries to Mrs. Mahlum allegedly caused by Dow Corning's silicone breast implants. 1 At trial, the Mahlums succeeded in convincing the jury that Dow Chemical was liable for several intentional torts, as well as the tort of negligent performance of an undertaking.

The jury found Dow Chemical liable for the negligent performance of an undertaking pursuant to Restatement (Second) of Torts § 324A. The definition of this tort, often referred to as the Good Samaritan rule, is as follows:

One who undertakes, gratuitously or for consideration, to render services to another which he should recognize as necessary for the protection of a third person or his things, is subject to liability to the third person for physical harm resulting from his failure to exercise reasonable care to perform his undertaking if

(a) his failure to exercise reasonable care increases the risk of such harm or

(b) he has undertaken to perform a duty owed by the other to the third person or

(c) the harm is suffered because of reliance of the other or the third person upon the undertaking.

Restatement (Second) of Torts § 324A (1979) [hereinafter section 324A].

I find the majority's analysis of the section 324A claim against Dow Chemical troubling for several reasons.

First, the majority appears to ignore a basic and, by any standards, a reasonable precept regarding duty in a negligent undertaking action: that a plaintiff asserting a section 324A claim must show that the defendant specifically undertook to perform the task that he is charged to have performed negligently. See In re Temporomandibular Joint (TMJ) Implants Prods.Liab.Litig., 113 F.3d 1484, 1493 (8th Cir.1997) ("TMJ Implants ") ("The scope of th[e] undertaking defines and limits an actor's duty under section 324A."). Further, a close examination of the tests of liquid silicone does not show that Dow Chemical undertook a duty to ensure the safety of the final product, silicone gel breast implants.

Second, even assuming that Dow Chemical did undertake to perform safety-testing of the silicone fluid that five to ten years later came to be used in Dow Corning's breast implants, the majority fails to cite any evidence in the record demonstrating that Dow Chemical negligently performed that undertaking.

Third, the majority fails plausibly to show the proximate nexus between this alleged breach and the harm that Charlotte Mahlum suffered.

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Fourth, the result of the majority's decision is that a research facility that tests some component, with or without knowledge of its purpose, may now be deemed to have undertaken an everlasting duty to supervise, monitor, and control a manufacturer's use of the component in any and all future products, or face infinite liability.

DOW CHEMICAL'S ALLEGED UNDERTAKING AND DUTY

Like any other claim of negligence, a threshold element of a negligent undertaking claim is the existence of a duty to use due care towards another's legally protected interest. See Perez v. Las Vegas Medical Center, 107 Nev. 1, 4, 805 P.2d 589, 590-91 (1991) (observing that to prevail on a negligence theory, the plaintiff generally must show five elements, the first of which is that the defendant had a duty to exercise due care towards the plaintiff). In determining whether such a duty exists, this court has held that it is the courts and not juries that have the ultimate responsibility to define the scope of duty in relation to particular circumstances and to define the legal standard of reasonable conduct in light of the apparent risk. See Ashwood v. Clark County, 113 Nev. 80, 84, 930 P.2d 740, 742 (1997). Consequently, whether evidence presented by the plaintiffs is sufficient to create a legally cognizable duty is a question for the courts. See Artiglio v. Corning Inc., 18 Cal.4th 604, 76 Cal.Rptr.2d 479, 957 P.2d 1313, 1318 (Cal.1998) ("Whether this essential prerequisite to a negligence cause of action has been satisfied in a particular case is a question of law to be resolved by the court."); Smith v. Allendale Mut. Ins. Co., 410 Mich. 685, 303 N.W.2d 702, 710 (Mich.1981) (rejecting argument that the extent and nature of an undertaking under section 324A are questions of fact for the jury; rather, it is "for the court to determine what evidence is minimally necessary to establish the elements of a relationship on which tort liability may be premised"); Matter of New York State Silicone Breast Implant Litig., 166 Misc.2d 299, 632 N.Y.S.2d 953 (Sup.Ct.1995) ("Matter of N.Y. State Silicone ") (addressing a similar claim of negligent undertaking against Dow Chemical by breast implant recipients, holding that "the question of whether a duty is owed in the first instance is a legal issue to be resolved by the court"), aff'd, 227 A.D.2d 310, 642 N.Y.S.2d 681, appeal dismissed, 89 N.Y.2d 889, 653 N.Y.S.2d 911, 676 N.E.2d 493 (N.Y.1996). There is insufficient evidence in the record to support a conclusion that Dow Chemical owed a duty towards Dow Corning's breast implant recipients . 2

Other courts confronted with similar facts have found no duty under section 324A. A New York court concluded that Dow Chemical lacked a duty to the ultimate purchasers of breast implants because: (1) there was only a "tenuous connection" between Dow Chemical and those ultimate purchasers, (2) Dow Chemical never provided or undertook to provide the plaintiffs with any services, any information, or any product, (3) there was no evidence that the ultimate purchasers of the breast implants ever relied on Dow Chemical or on any information that Dow Chemical provided to Dow Corning in making a decision to purchase breast implants, and (4) there is no evidence that Dow Chemical had any contact with the plaintiffs or knew their identity. Matter of N.Y. State Silicone, 632 N.Y.S.2d at 956. "Thus, plaintiffs cannot establish a sufficient relationship between themselves and Dow Chemical to justify imposing a duty on Dow Chemical." Id. The court made further observations that are important to note:

"While moral and logical judgments are significant components of the analysis, we are also bound to consider the larger social consequences of our decisions and to tailor

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our notion of duty so that 'the legal consequences of wrongs [are limited] to a controllable degree.' "

....

[The New York Court of Appeals] has "limited the universe of permissible plaintiffs because a failure to do so would impose a duty of reasonable care enforceable by any member of an indeterminate class of persons, present and prospective, known and unknown, directly or indirectly injured by any negligence." The court noted that "[t]he hazards of a business conducted on these terms are so extreme as to enkindle doubt whether a flaw may not exist in the implication of a duty that exposes to these consequences."

....

Although Dow Chemical may have had a duty to the actual users of its research such as Dow Corning, that liability does not extend ad infinitum to any potential ultimate user of a product which contains a silicone component. Dow Corning has over the years been in the business of manufacturing silicone related products for thousands of applications. If this court were to hold that Dow Chemical assumed a duty of care based on its silicone related testing and consulting to every potential ultimate consumer of a product which contained silicone, the duty imposed on Dow Chemical would be indeterminate and infinite.

Id. at 955, 956-57 (quoting Waters v. New York City Housing Authority, 69 N.Y.2d 225, 513 N.Y.S.2d 356, 505 N.E.2d 922 (N.Y.1987), and Eiseman v. State of New York, 70 N.Y.2d 175, 518 N.Y.S.2d 608, 511 N.E.2d 1128 (N.Y.1987)). The Appellate Division affirmed the court's decision, concluding that "[a] party who gives advice to a manufacturer of consumer goods does not owe a duty to then-unknown individual purchasers of the manufacturer's goods [.]" In re N.Y. State Silicone, 642 N.Y.S.2d at 682. I believe, as the New York court did, that to impose liability on Dow Chemical under these facts would be to endorse a duty that is indeterminate and infinite.

Likewise, the Eighth Circuit Court of Appeals noted that "[a]n actor's specific undertaking of the services allegedly performed without reasonable care is a threshold requirement to section 324A liability.... Accordingly, courts have refused to impose liability under section 324A without a showing that the defendant undertook a duty with respect to the specific product that caused the injury." TMJ Implants, 113 F.3d at 1493 (citations omitted). The TMJ Implants court concluded that, to establish liability under section 324A, plaintiffs had to prove that Dow Chemical undertook a duty with respect to TMJ implants. Id. Like the plaintiffs in our case, the TMJ plaintiffs argued that Dow Chemical assumed such a duty by "undertaking to render services to Dow Corning through its trademark agreements with Dow Corning and through its silicone research and testing performed for Dow Corning and that Dow Chemical should have recognized that these services were necessary for the protection of plaintiffs." Id. 3 The TMJ court concluded that Dow Chemical did not undertake a duty, either under the trademark agreement, or through silicone testing, or because Dow Corning lacked an adequate laboratory.

The silicone research allegedly performed by Dow Chemical at the request of Dow Corning also does not demonstrate an undertaking sufficient to impose liability on Dow Chemical under section 324A. For section 324A liability to attach, Dow Chemical must have specifically undertaken the task of ensuring the safety of Dow Corning's TMJ implants or of ensuring the safety of Dow Corning's entire array of silicone products. Plaintiffs contend that Dow Chemical undertook a duty with respect to all of Dow Corning's silicone products, but the record shows that Dow Chemical never tested the use of silicone in any medical implants and that Dow Chemical never was informed that any of the silicones it tested would be used in medical implants.... [p] Plaintiffs can point only to Dow Chemical's performance of approximately a dozen tests involving silicone (but not its use in medical implants) performed

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over four decades at the request of Dow Corning, ... a 1948 and a 1950 article published by three Dow Chemical scientists [i.e., the articles by Dr. Rowe] discussing toxicological research on various silicones, and a trademark agreement allowing Dow Chemical to inspect the quality of Dow Corning's products. However, these Dow Chemical actions and Dow Corning's purportedly inadequate laboratory facilities are insufficient to establish an undertaking of such breadth and magnitude as to create a duty on the part [of] Dow Chemical to ensure the safety of all of Dow Corning's silicone products.

TMJ Implants, 113 F.3d at 1495 (citations and footnote omitted).

In addition, the California Supreme Court held that silicone breast implant plaintiffs failed to make a case under section 324A based on much of the same evidence that is now before this court. See Artiglio, 76 Cal.Rptr.2d 479, 957 P.2d at 1318-21. The Artiglio court noted:

"The foundational requirement of [section 324A] is that in order for liability to be imposed upon the actor, he must specifically have undertaken to perform the task that he is charged with having performed negligently, for without the actual assumption of the undertaking there can be no correlative duty to perform that undertaking carefully."

Id. at 1318 (quoting Blessing v. United States, 447 F.Supp. 1160, 1188-89 (E.D.Pa.1978)). After reviewing the evidence the court stated:

In sum, the record before the trial court on summary judgment would not support a finding that Dow Chemical's was "an undertaking of such breadth and magnitude as to create a duty on the part of Dow Chemical to ensure the safety of all of Dow Corning's silicone products." Moreover, many years elapsed between Dow Chemical's seminal toxicology research activities on behalf of Dow Corning and plaintiffs' alleged injuries. When that research was done, any possible consequence for plaintiffs--who years later allegedly received medical treatments traceable to its influence--was exceedingly attenuated and remote. We conclude that, at the times Dow Chemical allegedly conducted or reported for Dow Corning the toxicology research services on which plaintiffs premise their section 324A claim, it cannot reasonably be concluded that Dow Chemical "should [have] recognize[d]" those services were "necessary for the protection of" (§ 324A) plaintiffs. Accordingly, under the theory articulated in section 324A, no duty of care running to plaintiffs arose from Dow Chemical's undertaking.

Artiglio, 76 Cal.Rptr.2d 479, 957 P.2d at 1320 (alteration in original) (quoting TMJ Implants, 113 F.3d at 1495, and section 324A).

The Mahlums cite Wright v. Schum, 105 Nev. 611, 781 P.2d 1142 (1989), for the proposition that a duty arises when a defendant asserts control over a person for whom that defendant undertakes a task. In Wright, our only prior case specifically dealing with a section 324A claim, a tenant's dog escaped the premises, and attacked and severely injured a child. Prior to the incident, the landlord had voluntarily implemented safety measures to have the dog secured within the tenant's yard, for the protection of the general public. The evidence showed that the landlord had exercised his control over the tenant's behavior by threatening eviction if the tenant did not comply with the request to secure the dog. Because the landlord had assumed to some degree the duty of securing the dog--originally only the tenant's duty--and then negligently performed that duty, the negligent undertaking claim against the landlord was allowed to go before a jury. Id.

The case at bar bears little resemblance to the facts in Wright . That Dow Corning lacked a toxicology laboratory until 1968 and commissioned Dow Chemical to perform various toxicology tests provides no reasonable basis for concluding that Dow Chemical "controlled" Dow Corning's development or testing of breast implants. The other evidence in support of this contention, including the trademark agreement, also fails to establish such an inference. Accordingly, the evidence was legally insufficient to show that Dow Chemical controlled Dow Corning regarding

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the creation and safety of its breast implants. 4

The Mahlums argue that the trademark agreement between Dow Chemical and Dow Corning is indicative of an undertaking and of control. The trademark agreement, however, does not, in my view, support the liability claims brought by the Mahlums. In 1975, Dow Corning and Dow Chemical memorialized an agreement in which Dow Chemical licensed the "Dow" trademark to Dow Corning. The agreement recited that Dow Chemical had established a valuable reputation under its corporate name "Dow." The agreement confirmed and ratified Dow Corning's use of the Dow mark, so that the valuable reputation established in the name Dow would be passed on to Dow Corning. The agreement also provided as follows:

The products manufactured, distributed and sold or any services rendered under The Corporate Title [Dow Corning Corporation], The Trade Name [Dow Corning], The Design Trademark [double rectangle], or other trademarks containing, consisting of or comprising "DOW CORNING" shall be of a nature and quality that is acceptable to Dow [Chemical] Company and shall not damage or reflect adversely on the reputation or goodwill associated with the name and mark "DOW". When requested, [Dow Corning] shall at reasonable times and places submit specimens of its products to Dow [Chemical] Company and shall permit inspection of [Dow Corning's] premises at reasonable times ... to examine the quality of such products.

The agreement stated that Dow Chemical and Corning had "controlled" the operations and the quality of goods and services of Dow Corning since that company's inception in 1943. Id. Dow Chemical thus maintained the authority to approve products using the Dow Corning mark. Dow Chemical could also require that Dow Corning terminate all use of the name Dow or any product not approved by Dow Chemical.

The Mahlums argued at trial and on appeal that the agreement demonstrated that Dow Chemical controlled the operations of Dow Corning and that Dow Chemical had the right to inspect and approve Dow Corning's breast implants. Dow Chemical argued that the agreement has little significance and that the language regarding control was required under the Lanham Trademark Act of 1946, 15 U.S.C. § 1051. According to Dow Chemical, there is no evidence that Dow Chemical exercised any control under this agreement regarding Dow Corning's breast implants. The head of Dow Corning's breast implant business testified that Dow Chemical never exercised any control over Dow Corning's breast implant business, and that he never knew of the agreement's existence.

One of the leading authorities on trademarks states that "[l]icensing a mark without adequate control over the quality of goods or services sold under the mark by the licensee may cause the mark to lose its significance as a symbol of equal quality--hence, abandonment." J. Thomas McCarthy, McCarthy on Trademarks and Unfair Competition, § 17:6, at 17-6 (4th ed. 1998) (McCarthy). "Today, trademark licensing is permitted so long as the licensor maintains adequate control over the nature and quality of goods and services sold under the mark by the licensee." Id., § 18:42, at 18-66. The licensor thus has a duty to control the quality of the goods and services sold under the mark; if it fails to do so, it may forfeit its right to the mark. See id., §§ 18:66-68; Dawn Donut Co. v. Hart's Food Stores, Inc., 267 F.2d 358 (2d Cir.1959).

In this case, no significance should attach to the agreement as evidence of Dow Chemical's "control" of Dow Corning, or evidence of conspiracy or concert of action to make misrepresentations to consumers of Dow Corning's breast implants. The "control" language was almost certainly placed in the agreement to protect Dow's right to the name "Dow" when associated with the "Dow Corning" mark. There is no evidence that Dow Chemical exercised any control or even

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inspected Dow Corning's breast implants under this agreement. Indeed, the evidence is that it did not.

In another silicone breast implant case, Artiglio, the California Supreme Court stated, "[w]hile the trademark and tradename agreements may have conferred upon Dow Chemical certain inspection rights, there is no suggestion that the agreements imposed a duty to perform tests, let alone that they constituted a general undertaking by Dow Chemical to guarantee the safety of Dow Corning's silicone product lines." Artiglio, 76 Cal.Rptr.2d 479, 957 P.2d at 1320. The court found no evidence that Dow Chemical inspected any Dow Corning product or provided any service to Dow Corning pursuant to such agreements. Id. As noted above, the Artiglio court ultimately rejected the claim that Dow Chemical was liable under section 324A.

The Eighth Circuit Court of Appeals reached a similar decision in TMJ Implants. In that case, the Eighth Circuit considered the trademark agreement at hand pursuant to an argument that Dow Chemical was liable under a theory of negligent undertaking for damages caused by Dow Corning TMJ products. Plaintiffs argued that Dow Chemical assumed a duty with respect to TMJ implants by undertaking to render services to Dow Corning through trademark agreements. The Eighth Circuit rejected the argument:

The record ... contains no evidence to show that Dow Chemical undertook to render services to Dow Corning through its trademark agreements. A standard trademark agreement, in and of itself, does not establish an affirmative duty to inspect that could result in tort liability to third parties, and nothing in the record suggests that these are other than standard trademark agreements. Plaintiffs can point to no evidence that Dow Chemical in fact inspected any Dow Corning product or provided any services to Dow Corning pursuant to these agreements. These agreements can only be viewed, then, as a vehicle for Dow Chemical to protect its intellectual property rights, and thus they do not represent an undertaking on the part of Dow Chemical to render services to another. Accordingly, these agreements do not trigger section 324A.

TMJ Implants, 113 F.3d at 1494 (citations omitted).

In other product liability cases, plaintiffs have argued that the existence of control language in a trademark agreement can make a defendant licensor liable for failure to inspect a product bearing its trademark but made by another company. But existence of language of control in such an agreement does not make the licensor liable for defects in the licensee's products.

Under this body of law, the sole consequence of a trademark owner's failure to exercise control over its licensees is the potential loss of the rights associated with the trademark. None of these cases suggests, in any way, that a trademark owner's failure to exercise control subjects the owner to affirmative liability in tort for damages caused by a defective product bearing its trademark.

Burkert v. Petrol Plus of Naugatuck, Inc., 216 Conn. 65, 579 A.2d 26, 32 (Conn.1990) (citing S. Sandrock, Tort Liability of a Non-Manufacturing Franchisor for Acts of Its Franchisee, 48 U.Cinn .L.Rev. 699, 706 (1979)).

Like the plaintiffs in Artiglio and TMJ Implants, the Mahlums argue that Dow Chemical assumed a duty of care towards them by performing certain toxicological tests on liquid silicones for Dow Corning and by maintaining a "relationship of control" over Dow Corning. They rely on Dow Chemical toxicologist Dr. V.K. Rowe's various connections to Dow Corning's silicone testing as a basis for Dow Chemical's undertaking of this duty. My review of the record compels me to disagree.

The Mahlums and the majority emphasize, without fully describing their nature, the multitude of toxicological tests Dow Chemical performed for Dow Corning from the 1940s into the 1960s. 5 Given their obvious importance,

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a closer review of what these tests revealed appears warranted. There are over a hundred tests in the record comprising the so-called "component testing" Dow Chemical performed for Dow Corning. Nearly all of these tests are what are termed toxicological "industrial handling" tests: i.e., the purpose of these tests is to discover what safety measures should be undertaken by the employees who handle the tested material in the manufacturing process. The following is an excerpt from a typical test report Dow Chemical submitted to Dow Corning from the 1940s into the 1960s:

Subject: THE RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON METHYL HYDROGEN MIXED CYCLICS

PROBLEM

The sample of methyl hydrogen mixed cyclics which were [sic] submitted to us on September 4, 1956 is being handled for the preparation of foam resins. What precautions must be taken to handle this material safely?

CONCLUSIONS

This material has a low acute oral toxicity, the LD50 for rats being greater than 2 gm./kgm. of body weight. It is essentially without effect on contact with the eyes and with the skin, and apparently is not absorbed through the skin in acutely toxic amounts. Vapor concentration attainable at room temperature should not present a problem upon single vapor exposure. However, when the material is heated to 100$C very slight irritation to the eyes may be expected.

This material does not appear to present any unusual health hazards. The practice of ordinary care and cleanliness should be sufficient to avoid difficulties in handling.

These conclusions are based upon range finding toxicological tests and are limited to precautions for industrial handling of the material. The development of specific uses for this material will make it necessary to give careful consideration to the health problems presented and to the need for further toxicological studies .

(Emphasis added.)

This report exemplifies the type of testing Dow Chemical performed for Dow Corning prior to the invention of silicone breast implants in 1962; over a hundred other Dow Chemical toxicological reports in the record on Dow Corning's silicone compounds mirror its format and language. Further, from time to time, Dow Corning would inform Dow Chemical of the potential use of the tested material. In such an instance, Dow Chemical often would include an opinion on the suitability of the substance for the contemplated use based on the available information provided by the range finding test; however, even these reports ended by specifically noting that the conclusions were ultimately reliable only as to industrial handling purposes and that any specific uses in products should undergo further, extensive toxicological testing. At most, these tests may support the hypothesis that Dow Chemical undertook a duty towards Dow Corning's employees to competently test for potential handling hazards of Dow Corning's chemical substances. Cf. Miller v. Bristol-Myers, Co., 168 Wis.2d 863, 485 N.W.2d 31 (Wis.1992) (holding that a parent corporation may be liable for unsafe conditions at a subsidiary where it assumed a duty to act by affirmatively undertaking to provide a safe working environment at the subsidiary) . 6 These tests do not create, however, a reasonable inference that Dow Chemical undertook a duty to ensure the safety of

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Silastic breast implants, or any Dow Corning product for that matter, by testing Dow Corning's silicone compounds for a limited purpose. 7

Other tests the majority relies upon include the 1948 article co-written by Dr. Rowe, the 1956 Chenoweth study showing silicone migration, the 1957 Miami study showing that DC 200 fluid decreased the number of white blood cells in female rat tails, the 1967 dog miniature implant study, and the 1970 Sparschu pathology report showing migration of silicone to bone marrow.

The 1948 article, entitled Toxicological Studies on Certain Commercial Silicones and co-authored by Dow Chemical's toxicologist, Dr. Rowe, was printed in the Journal of Industrial Hygiene and Toxicology, Vol. 30, No. 6, pp. 332-52. According to the Mahlums, this article misrepresented to the scientific community that silicones were harmless and posed no threat to human health. However, the purported misrepresentation that all silicones are inert was included in a section entitled "Discussion of Practical Handling Problems," where it states that "[t]oxicological studies conducted with representative silicone materials show that the silicones as a group have a very low order of toxicity. When these materials are considered from a practical viewpoint, the hazards they present are exceedingly minor." Once again, the article was specifically addressing industrial hazards. Further, the article does not represent that silicones have no toxicity whatsoever. 8 Rather, it reports skin and eye irritations observed in the test subjects, but concludes that industrial exposure to the substances presents no significant danger. The final sentence of the article concludes as follows: "Toxicological studies with laboratory animals have shown that the silicones (methyl and mixed methyl and phenylpolysiloxanes) as a class are very low in toxicity and that they present no significant handling problems."

Next, the 1956 Chenoweth study is an internal Dow Corning study conducted by two Dow Corning scientists and one Dow Chemical scientist, Dr. M.B. Chenoweth. It examined the physiological assimilation of the DC 200 fluid, which was a silicone fluid used for industrial purposes. DC 200 was mixed with an antifoam emulsion and orally administered to three animals: one albino rat and two dogs. No evidence of assimilation was found in the rat, but traces of siloxane were found throughout the bodies of both dogs. Another rat was given an intramuscular injection of the fluid, and siloxane was also found throughout its body in very low concentrations. This study did not address whether the trace amounts of siloxane found in the various organs of the animals harmed the animals or not. I also note that Dr. Chenoweth's role in the study was comprised of "preoperative care, administering of the labeled fluid, sacrificing, and dissecting of the animals." 9 The Dow Chemical radiochemical laboratory also "cooperat[ed]" in the analysis of the tissue samples from the animals along with, it appears, Dow Corning's analytical laboratory.

Thus, this study was a Dow Corning study with some cooperation from Dow Chemical. There is nothing in Dow Chemical's participation that would serve as

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a clear warning signal to Dow Chemical that the medical use of silicone should be abandoned.

The 1957 Miami study, the results of which showed that DC 200 fluid depressed the granulocytic elements of the tail blood of female rats, was not conducted by Dow Chemical. However, Dr. Rowe was approached by Dow Corning to set up the study, and he designed the test protocol for Professor Deichmann from the University of Miami. Two versions of this study were prepared by Professor Deichmann, one reporting on the effects of six silicone materials, and the other reporting only on five. The Mahlums argued at trial that the two Dow companies were in cohorts in either preparing or publishing the five materials report to conceal the harmful effects of the sixth silicone material. This assertion is not supported by the record. First, the sixth material that was omitted in the report on five silicone materials is a substance identified only as "Z-4141," and the Mahlums do not contend that Z-4141 is contained in Dow Corning's breast implants. Thus, its effects, whether harmful or not, have no bearing on the Mahlums' claims. Second, there is no evidence to suggest that Dow Chemical (via Dr. Rowe or otherwise) played any part in creating the second report. The evidence thus indicates that Dow Chemical had no role in attempting to hide the effects of "Z-4141." 10

The Mahlums also cite the 1970 pathology report prepared by a Dow Chemical scientist, Dr. Gary L. Sparschu, as another link establishing Dow Chemical's undertaking to ensure the safety of silicone gel breast implants. This study injected rats, male and female, with different doses of DC 360, intraperitoneally and subcutaneously. The pathological results showed traces of the silicone fluid throughout the animals' bodies, including the bone marrow. The male rats in one group showed decreased liver weights, and the female rats in another group had decreased brain weights. The report concluded, however, that "[t]hese findings do not appear to be associated with treatment because the effect is not dose related." An inflammatory reaction was not associated with the deposition of DC 360 in the organs. Again, given that the Mahlums do not assert that Dow Chemical performed any of its tests negligently, and that this report found no significant dangers of DC 360, we are left only to speculate as to how this report also should have raised an alarm for Dow Chemical to publish this information.

In a letter from the independent laboratory, Food and Drug Research Laboratories, Inc. (FDRL), to Dow Corning in 1964, FDRL submitted a revised proposal on certain polysiloxane studies pursuant to Dow Corning's modifications "as well as [its] conversations with Dr. V.K. Rowe at the Gordon Research Conference recently." This is the only link connecting Dr. Rowe, and therefore Dow Chemical, to the 1964 polysiloxane dog studies performed by FDRL for Dow Corning. In 1964, FDRL began conducting a long-term (2 years) study of silicone migration (including that of DC 360 when injected) in animals and the extent to which the compounds remain in animal tissues. FDRL reported its results to Dow Corning in 1968.

In 1967, a second two-year study of miniature implants in dogs was performed by the same independent testing laboratory for Dow Corning. The evidence linking Dow Chemical to this study was that Dr. Rowe was one consultant among several who recommended that the study be done. These FDRL studies show that Dow Corning was not relying on Dow Chemical's alleged undertaking as having established the safety of silicone gel breast implants.

The Mahlums conceded that Dow Chemical properly executed the tests that it performed for Dow Corning. Instead, the Mahlums alleged that Dow Chemical was negligent in failing to recommend further studies to ensure that silicone fluids could safely be used in its breast implants. The record, however, shows that Dow Chemical did make such a

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recommendation regarding Silastic implants. In 1967, Dr. Rowe recommended, presumably in his role as an advisor, to Dow Corning's product safety committee that long-term testing of miniature implants in dogs be conducted to establish the safety of Silastic implants. In response to this recommendation, Dow Corning commissioned the 1967 FDRL long-term study.

In summary, proof at trial identified a series of tests that Dow Chemical performed for Dow Corning at Dow Corning's request. Dow Chemical performed these studies and reported them to Dow Corning. There is no proof suggesting that Dow Chemical manipulated the results or failed to report them accurately to Dow Corning. It was then Dow Corning's responsibility to interpret these tests and make decisions regarding the information contained therein regarding its product line. Dow Corning was a creature of state corporate law, a deliberately-created separate and economically independent entity that was specifically spun-off from Dow Chemical and Corning Incorporated in order to develop silicones for the marketplace. Dow Corning was not undercapitalized, not created as a vehicle for

fraud or abuse, and was subject to proper corporate formalities; it was not, in other words, an alter ego of Dow Chemical and/or Corning Incorporated. Dow Chemical did not undertake to perform tasks for Dow Corning that Dow Corning was specifically created to perform, namely, to design, manufacture, and market silicone products.

DOW CHEMICAL'S ALLEGED BREACH

As I stated earlier, the majority fails to cite any convincing evidence in the record demonstrating that Dow Chemical negligently performed the alleged undertaking. Dow Chemical's breach, according to the majority, was that it failed to prevent Dow Corning from marketing silicone breast implants, given its relationship to the subsidiary as a parent corporation and as a consultant, and it failed to warn the public about the dangers of silicone breast implants. This analysis applies only if one concludes that Dow Chemical had a duty to control Dow Corning's product decisions. There is no evidence in the record that Dow Chemical had any such duty.

The California Supreme Court in Artiglio stated that " '[t]he duty of a "good Samaritan" is limited. Once he has performed his voluntary act he is not required to continue to render aid indefinitely.' " 76 Cal.Rptr.2d 479, 957 P.2d at 1319 (quoting Baker v. City of Los Angeles, 188 Cal.App.3d 902, 233 Cal.Rptr. 760 (Ct.App.1986)). "Thus, 'a Good Samaritan who has performed a series of voluntary acts in the past is not thereafter required indefinitely to continue performing such acts into the future.' " Id. (quoting City of Santee v. County of San Diego, 211 Cal.App.3d 1006, 259 Cal.Rptr. 757 (Ct.App.1989)). It is undisputed that Dow Chemical performed what testing it did non-negligently. Legally, Dow Chemical was not obligated to do more. Dow Chemical was not under a permanent duty to keep track of Dow Corning's silicone fluid products, ascertain whether such products were harmful, and manipulate Dow Corning into stopping production. Accordingly, it cannot be said that Dow Chemical breached any duty.

LACK OF PROXIMATE CAUSE

The majority concludes that Dow Chemical was negligent for failing to oversee and prevent Dow Corning from designing and marketing the breast implants when it had the "power" to do so. Even assuming negligence, Dow Chemical's actions in the 1950s and 1960s cannot be the proximate cause of any harm to Mahlum after she received her breast implants in 1985.

Several reasons support my conclusion. First, when Dow Chemical performed silicone tests on DC 200 or DC 360 for Dow Corning prior to the invention of silicone gel breast implants, Dow Chemical could not have foreseen the uses to which Dow Corning would put these silicone fluids. In Artiglio, the California Supreme Court noted that "many years elapsed between Dow Chemical's seminal toxicology research activities on behalf of Dow Corning and plaintiffs' alleged injuries. When that research was done, any possible consequence for plaintiffs--who years later allegedly received medical treatments traceable to its influence--was exceedingly

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attenuated and remote." Artiglio, 76 Cal.Rptr.2d 479, 957 P.2d at 1320. Second, Dow Corning also performed its own product safety testing, specifically on breast implants, from the early 1960s onward. By contrast, Dow Chemical never tested silicone gel breast implants. In addition, Dow Corning relied upon safety testing by Dr. Cronin in the early 1960s before marketing its breast implants. Third, the Mahlums contend that Dow Corning was aware of possible biological effects and migration of silicone fluids from late 1960s onwards; if true, then Dow Corning could not have been relying upon Dow Chemical to ensure the safety of silicone gel breast implants.

CONCLUSION

Finally, the majority holding with regard to the claim of negligent undertaking will have far-reaching implications on our jurisprudence. As mentioned above, Dow Chemical and Corning Incorporated created Dow Corning as a separate entity under corporate legal principles. There is no suggestion that Dow Corning is or was underfunded or a product of fraud or abuse. Indeed, the Mahlums explicitly abandoned their alter ego theories in this case. Yet the Mahlums and this court seek to make Dow Chemical responsible for Dow Corning's alleged product failures. 11

Additionally, in performing tests and advising on how other tests should be performed, Dow Chemical often served in the role of consultant. It is also in that role of consultant that the Mahlums and this court seek to render Dow Chemical liable in tort for allegedly undertaking responsibilities that were properly Dow Corning's. The majority now states, in effect, that it will hereafter require companies (i.e.consultants) to publish unfavorable test results that they have done for their clients. This duty will also require an attendant duty of consultants to monitor their client's new products, to determine whether their research is implicated in those products. Neither the law nor public policy justifies such a result.

The Mahlums thus lacked evidence to establish that Dow Chemical ever undertook a duty to test the safety of the silicone fluid used in Dow Corning's breast implants or undertook a duty to test and guarantee the safety of the breast implants themselves. The jury's verdict on the Mahlums' claim of negligent performance of an undertaking

should not stand. I therefore dissent from the affirmance of the claim of negligent undertaking, and would reverse the judgment in its entirety.

SHEARING, J., concurs.

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1 Although Dow Chemical also purports to appeal from the district court's order denying its alternative post-judgment motion for judgment notwithstanding the verdict, we have previously explained that no appeal may be taken from an order denying a post-judgment motion for judgment notwithstanding the verdict. See, e.g., Uniroyal Goodrich Tire v. Mercer, 111 Nev. 318, 320 n. 1., 890 P.2d 785, 787 n. 1. (1995).

2 There is conflicting evidence in the record regarding when Dow Corning began marketing its breast implants. While Dow Chemical maintains that initial sales began in 1964, testimony at trial suggested that Dow Corning began profiting from breast implants in 1962.

3 We have considered Dow Chemical's argument that this court should adopt the decision of the United States Supreme Court in Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993), regarding the admissibility of scientific evidence. The interpretation of a federal counterpart to a Nevada rule of evidence may be persuasive, but is not controlling. See Dougan v. Gustaveson, 108 Nev. 517, 835 P.2d 795 (1992). We believe that the Daubert doctrine is a work in progress, and that we should observe the doctrine's further development in the federal courts before concluding that Daubert should be adopted as the law of this state. Above all, we do not presently perceive a need to adopt Daubert, based on our perception of developments in Nevada law, and we therefore decline to do so.

4 We have no way of knowing what the outcome would have been had Dow Corning been present at trial. Neither the judgment in this case nor this decision should foreclose Dow Corning from a full and fair trial on the merits if the Mahlums continue to press their claims after Dow Corning emerges from bankruptcy.

5 Dow Chemical contends that reversal is warranted because this court has never recognized a civil cause of action for aiding and abetting or concert of action. We disagree. The fact that this court has not previously recognized a cause of action will not warrant reversal where that claim is well grounded in the common law. See NRS 1.030 (providing that common law shall be the rule of decision in Nevada courts unless "repugnant to or in conflict with ... the constitution and laws of this state"). Our review suggests that the two theories under consideration here, while limited in scope, are well grounded in common law. See, e.g., Halberstam v. Welch, 705 F.2d 472 (D.C.Cir.1983); W. Page Keeton et al., Prosser and Keeton on Torts 322-24 (5th ed.1984).

6 Although the jury was instructed consistently with Restatement section 876(c), the verdict form did not refer to a separate claim under 876(c), but asked whether Dow Chemical was liable for concert of action and/or aiding and abetting. Even though the jury received instruction on section 876(c), we reject liability under that section because, as discussed infra, we conclude that there was no substantial assistance.

7 Accordingly, the Mahlums' cross-appeal with respect to post-judgment interest on punitive damages is moot. See NRS 42.005; Wichinsky v. Mosa, 109 Nev. 84, 847 P.2d 727 (1993).

8 A Dow Corning scientist testified that Dow Corning relied on outside consultants, such as Dow Chemical, to interpret toxicology results. Thus, although Dow Chemical argues that it did not perform any tests negligently, the jury could have determined that Dow Chemical was negligent for not fully advising Dow Corning on the meaning of certain test results.

9 Dow Chemical correctly points out that most of the toxicological tests it performed for Dow Corning fell under the heading of industrial handling tests. The evidence, however, also showed that Dow Chemical freely offered Dow Corning advice on the safety of the products containing the tested materials. For example, Dow Chemical counseled Dow Corning to include a safety warning on a hair conditioner and to conduct further tests on a silicone material used in foot ointment before marketing it. Further, even though the majority of Dow Chemical's tests related to industrial handling, it is undisputed that Dow Chemical was involved with testing liquid silicones for purposes other than industrial handling. That Dow Corning relied on Dow Chemical's toxicological expertise was testified to at trial by former Dow Corning employees, who believed, in the 1950s and the 1960s, that Dow Chemical scientists were the "experts" on silicone toxicology.

10 This information is partially contained in Dow Chemical's 1959 annual report to its stockholders. A Dow Chemical physician also wrote several articles in the early 1960s on various silicone catheters and tubes made by Dow Corning.

11 The jury heard evidence from Dr. Rowe that he was aware Dow Corning was using liquid silicone in its breast implants; this information can also be inferred from his involvement in the 1967 miniature implants study in dogs.

12 Dr. Rowe's testimony and other evidence in the record confirmed that he rendered these services for Dow Corning from the 1940s into the 1970s. Dr. Rowe designed the testing protocol for the 1957 Miami study conducted by Professor Deichmann. He also was consulted on the 1967 dog implant study conducted by an independent

laboratory. On the topic of reliance, evidence in the record showed that even in the 1980s, Dow Corning was relying on the 1948 article written by Dr. Rowe for the proposition that silicones were generally inert.

13 Although William Caldwell, a Dow Chemical and Lepetit employee at various times, testified that this agreement pertained to pharmaceutical research, the jury could conclude that this agreement was broad enough to encompass liquid silicone.

14 Dow Chemical obtained a majority interest in its Italian subsidiary Lepetit in 1967 and eventually owned more than ninety-nine percent of the company. Through this company, Dow Chemical marketed Dow Corning breast implants outside the United States. As mentioned above, R. William Caldwell, who was Assistant Director of Dow Chemical's Bioproducts Division, testified that he became the "Administore Delegato" of Lepetit. This title gave him the right to buy, sell or trade Lepetit. Additionally, Caldwell testified that even during his tenure at Lepetit, he considered himself a Dow Chemical employee.

Although Dow Chemical's heavy involvement in Lepetit and its breast implant marketing activities does not affect our analysis of the scope of Dow Chemical's undertaking, this evidence does suggest that Dow Chemical had significant knowledge about Dow Corning's breast implants and additional problems associated with them. For instance, in 1971, Lepetit prepared a laboratory report evaluating the pharmacological effects of some silicone components due to reports that some silicone compounds have potential depressant activity on the central nervous system of mammals. This report was copied to Charles Hinman, then assistant director of Dow Chemical's corporate research and development department as well as the director of Dow Chemical's chemical biology research laboratory responsible, in part, for pharmaceutical research. Additionally, the record shows that during 1973 and 1974, Lepetit received numerous reports from physicians complaining about ruptures and other problems of Dow Corning's Silastic breast implants. Given that Lepetit was virtually a wholly-owned subsidiary of Dow Chemical, and the evidence suggesting a high degree of control by an individual who reported directly to Dow Chemical, Lepetit's knowledge of consumer complaints regarding Dow Corning's breast implants can be imputed to its parent corporation. This evidence further supports a finding that Dow Chemical was aware that it needed to act to protect implant recipients.

15 Dow Chemical is not immune from liability based on the mere fact that Dow Corning did not introduce its silicone gel breast implants until 1962, several years after the Chenoweth and the Miami studies were done. Neither is Dow Chemical absolved from liability because the injuries to Mahlum occurred in the 1990s, when Dow Chemical had ceased performing any tests for Dow Corning's silicone materials. The consequences of a negligent defendant's act under section 324A may come to fruition many years after its undertaking has ended, and still the courts have found that liability may exist. See, e.g., Deines v. Vermeer Mfg. Co., 752 F.Supp. 989 (D.Kan.1990), aff'd, 969 F.2d 977 (10th Cir.1992) (holding that defendant insurance company that no longer insured the manufacturer could be held liable for injuries caused by a hay baler machine built in 1978 based on a 1974 design safety-inspected by defendant).

16 The justices dissenting to this opinion's conclusion on negligent undertaking posit that this language from Wright cuts against any emphasis we place on Dr. Rowe's status as a consultant. By making this assertion, they misconstrue our analysis and conclusion. Wright explains that mere advice, in and of itself, cannot create section 324A liability. We do not even remotely propose that Dr. Rowe's actions, considered alone, would implicate section 324A. Dr. Rowe's role as a consultant is one of many factors that the jury assessed in determining the scope of Dow Chemical's undertaking.

17 As stated above, we do not suggest that negligent undertaking liability could be imposed on Dow Chemical merely because of its parental relationship with Dow Corning. We also do not imply that liability for negligent undertaking could be imposed on Dow Chemical merely because, at various times, it tested precursor components and the main component of the gel in Dow Corning's Silastic breast implants. A consultant performing tests on components for a customer has a duty only to reasonably fulfill such duties as contemplated by the parties under their agreement. Here, however, we must emphasize that Dow Chemical's involvement with and control over Dow Corning and its development of breast implants far exceeded that of a mere consultant. We disagree with our colleagues' characterization of this opinion as working mischief and having "far reaching implications" on Nevada jurisprudence. Our analysis of section 324A does not create an "everlasting duty" and "infinite liability" for consultants who perform limited testing or merely provide expertise and advice. As we have explained, the Mahlums' proffer of evidence indicated and suggested that Dow Chemical had significant control of Dow Corning. This evidence of control has led us to conclude that Dow Chemical's undertaking, and correlative duty, transcended that which would normally be attributed to an independent consultant.

Additionally, we wish to point out that Dow Chemical's duty as a "good samaritan" is not unlimited. We are well aware of the troubling issues regarding the scope of Dow Chemical's duty. See, e.g., Matter of New York State Silicone Breast Implant Litig., 166 Misc.2d 299, 632 N.Y.S.2d 953, 956-57 (Sup.Ct.1995) (noting that if it were to

hold that Dow Chemical assumed a duty of care to all potential consumers of silicone products, "the duty imposed on Dow Chemical would be indeterminate and infinite"), aff'd, 227 A.D.2d 310, 642 N.Y.S.2d 681, appeal dismissed, 89 N.Y.2d 889, 653 N.Y.S.2d 911, 676 N.E.2d 493 (N.Y.1996). We need not view the scope of Dow Chemical's duty as reaching all potential consumers of silicone products. We conclude only that Dow Chemical undertook to completely and accurately test the safety of the silicone liquid that was subsequently used in breast implants. In light of this undertaking, Dow Chemical owed a duty of care to breast implant recipients.

18 Dow Chemical asserts that in order for reliance to be proven, Dow Corning needed to forego all other remedies related to the safety of liquid silicones, such as testing by other laboratories on liquid silicones or the breast implant product itself. Dow Chemical's approach is too restrictive. In Canipe v. National Loss Control Service Corp., 736 F.2d 1055 (5th Cir.1984), an injured machine operator brought an action for personal injuries against a corporation which had contracted with the injured operator's employer to provide safety inspections and other accident-prevention services in the injured operator's workplace. In addressing a similar argument by the defendant corporation that a prerequisite of liability was that the employer had foregone any other safety precautions other than those provided by the defendant, the Fifth Circuit Court of Appeals rejected the defendant's argument and held that "an employer's partial reliance on the defendant's undertaking will suffice to trigger subsection (c) [of Restatement section 324A] ." Id. at 1063. In short, the Mahlums need not have shown that Dow Corning completely abandoned all other safety tests or inspections in reliance on Dow Chemical's undertaking.

19 Dow Chemical had submitted affidavits from the attorneys stating that Dow Corning had given its permission, but had not submitted evidence of direct permission from Dow Corning. The district court properly insisted on a letter from Dow Corning before it would consider permitting the representation.

1 The Governor appointed the Honorable Jack Ames, District Judge, to sit in the place of the Honorable Cliff Young, Justice, who voluntarily recused himself from participation in the decision of this appeal. Nev. Const. art. 6, § 4.

1 I join the majority in affirming the negligent undertaking judgment; still, Dow Chemical has presented some very persuasive arguments on the question of causation. The plaintiffs have, of course, the burden of proving that the chemical compounds which make up the implant were a substantial factor contributing to the harm suffered by Mrs. Mahlum. I have no trouble with the causation issue as it relates to the severe local reaction caused by the implants. I am aware, however, that proof of causation as to autoimmune and systemic disease is problematical, principally because these disorders frequently occur in the absence of implants and because a very large body of investigators does not accept the correlation between implants and systemic disease. Although recognized connective tissue disorders are regularly encountered by breast implant recipients, it would appear that there is a paucity of epidemiological evidence to indicate that women with implants are more likely to develop these disorders than women without implants. In my view, under the circumstances of this case, Mrs. Mahlum should not have to wait for a "general acceptance" or other indicia of biomedical consensus that implants cause systemic harm as a condition to her proceeding with her claim against Dow Chemical. In agreeing with the majority, I take the position that there is nothing in this record that prevents us from accepting case-specific causal analysis upon which the Mahlum claim is based.

2 Subsequent to the Dow Chemical and Dow Corning "joint development program," came an additional agreement on August 14, 1969, in which Dow Corning and Dow Chemical with Dow Chemical's subsidiary, LePetit SpA, the international distributor of the breast implant, agreed to carry out further work in the area of "biological activity" of silicones. The August 14 "obligation of confidence and nonuse" undertaken by the three companies required "technical information" concerning biological activity of silicones to be held in confidence; and each company agreed that it would not use the biological information developed in their joint development program for "commercial purposes" other than as joint developers of the biological products contemplated by the agreement.

3 Dow Chemical stated that it "controlled" (past tense) Dow Corning's operations and the quality of its goods. Now it claims that the statement was untrue and that it was merely meaningless "boilerplate" that was necessary to preserve its right to "use of the 'Dow' mark." Dow Chemical argues that there was "no evidence" that Dow Chemical "actually controlled the quality" of Dow Corning products. Whether Dow Chemical actually controlled Dow Corning or was deceiving the Patent and Trademark Office is a matter for the jury to decide.

4 A particularly poignant indication of the collaborative arrangement between the two Dow companies is the reference in a February 1, 1967, board meeting to a

joint research agreement with Dow Chemical Company pertaining to certain silicone products ... and [a] joint development agreement relating to the physiological effects resulting from ingestion or injection into the systems of animals or men of particular physiologically active silicones, wherein in principle, the parties shall jointly share the costs and shall share the profits and losses of any commercialization.

5 Dr. Lappe testified that he had reviewed approximately 10,000 documents and that he had screened 205 CD-ROM disks, each of which had 20,000 or more pages that pertain to the documents involved in breast implant litigation.
6 It can be inferred from Dr. Lappe's testimony that Dow Chemical was motivated by haste in its decision to conceal information and thereby get the product on the market "before it was ready," so to speak. Dr. Lappe testified that he had studied the history of tests done by the two companies and that, up to the time that Mrs. Mahlum received her implant, Dow Chemical had never suggested to Dow Corning that Dow Corning or Dow Chemical do a long-term study on the material used in the implant. Dow Chemical did not advise Dow Corning that it was "seeing some inflammation ... seeing some toxic effect, it's not inert." Instead, testified Dr. Lappe, "Dow [Chemical] did not report key findings of adverse effects of components of Dow Corning's silicone based breast implants. They didn't report the studies on the composition of bleed. They did not report the studies that would demonstrate the toxicologic properties were of the known components of silicone gel." According to Dr. Lappe, "Dow Chemical had and did exercise control over what went into those external tests by actually designing the test for Dow Corning of what a toxicological assay would look like." Notwithstanding, according to Dr. Lappe, "Dow Corning directly concealed some of the most relevant information that would have been useful for physicians implanting devices and the scientific community studying the effects of silicone" and, particularly, the information "that silicone gel had profound immunologic activities, and that those immunologic activities could adversely affect the human body...." The conclusion that can be drawn from the Lappe testimony is that this device was marketed at a time when far too little was known to enable patients to make an informed choice. Whether premature release of these devices was prompted by a desire to be first in the marketplace, I cannot say; but I do think that the jury would have been justified in so concluding and could have taken this as evidence of implied malice.
1 I wish to emphasize that any conclusions I have drawn regarding Dow Chemical's liability have no implications as to the Mahlums' action against Dow Corning. It has not escaped my attention that Dow Corning sought bankruptcy protection on the eve of trial, thus neutralizing the traditional direct products liability claims the Mahlums may have had against it and leaving them to proceed to trial solely against Dow Chemical.
2 I would also decline to follow, as the Mahlums urge, the federal district court decision in In re Silicone Gel Breast Implants Prods.Liab.Litig., 887 F.Supp. 1455 (N.D.Ala.1995) ("In re Silicone Gel ") (holding that the foreseeability of harm to third persons alone may be sufficient to create a duty to the third persons). A basic tenet of tort negligence law is that foreseeability, while a predicate of negligence liability, is insufficient by itself to establish duty. Ashwood, 113 Nev. at 85, 930 P.2d at 743; see also In re New York State Silicone Breast Implant Litig., 227 A.D.2d 310, 642 N.Y.S.2d 681 (App.Div.1996) ("In re N.Y. State Silicone ") (refusing to follow In re Silicone Gel); TMJ Implants, 113 F.3d 1484 (8th Cir.1997) (same).
3 The trademark agreement is addressed below.
4 I note that Wright also undercuts the emphasis that the majority places on Dr. Rowe's role as a consultant to Dow Corning. This court specifically noted in that case "that the mere advice or warning by one person to another that care should be taken to avoid a certain risk does not in itself create an undertaking and consequent liability on the part of one giving such advice." Wright, 105 Nev. at 614, 781 P.2d at 1145.
5 The Mahlums and the majority observe that one Dow Corning employee testified that "every new organosilicon" from Dow Corning was sent to Dow Chemical for testing. The same testimony went on to qualify, however, that the procedure was to evaluate the silicones "for [their] potential hazards just in material handling. That was simply a safety procedure."
6 The Mahlums argue that, according to Restatement section 324A, "any undertaking to render services to another" can impose liability on a defendant. See section 324A, cmt. b. Comment b, however, is entirely consistent with the clarification of section 324A given by the courts, namely that the scope of the undertaking logically limits the scope of liability to follow. Thus, the scope of the undertaking regarding toxicological tests for industrial handling purposes limits Dow Chemical's potential liability exposure to industrial injuries. Dow Chemical's possible liability based on other testing is discussed in the text above.
7 It is undisputed that there exist thousands of different organosilicon compounds and that different formulations of these compounds possess different properties, i.e., organosilicons are not fungible chemicals. Further, silicones (a shorthand way of referring to organosilicons) come in various forms: compounds, resins, fluids, and hard, rubber-like substances. The particular form silicone may take matters, and the testing results of one type of form, such as the rubber form, do not automatically apply to another form, such as the fluid.
8 For example, immediately after stating that silicones as a group pose minor hazards, the article states that "[t]he volatile hexamethyldisiloxane is a good solvent, and as with any good organic solvent, repeated and prolonged skin contact should be avoided. The material is immediately painful to the eyes but causes no corneal damage." Dr. Rowe testified in this case that at the time he did not know that silicones were to be used in medical devices. He also

observed that the article merely states that the materials studied under the specific set of circumstances described in the article showed no adverse toxicological effects; he believed that such results would hold true even today.

9 Dr. Chenoweth's signature is missing from the copy of the report signed by the other two authors, Dow Corning scientists.

10 The 1957 Miami study tested DC 200, an industrial grade of the DC 360 medical grade fluid used in Silastic II breast implants. DC 360 was not utilized in Dow Corning's breast implants until 1975--when Silastic I was first marketed. Prior to 1975, it appears that another Dow Corning silicone fluid, DC 330, was used in its breast implants.

11 I do not mean to criticize the Mahlums for their attempts to adapt tort liability concepts to this problem. The untimely departure of Dow Corning from this litigation made the Mahlums' task in establishing liability most difficult indeed.