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IN THE COURT OF APPEAL OF THE STATE OF CALIFORNIA
FIRST APPELLATE DISTRICT
DIVISION THREE

MACK SHELBY,

Plaintiff and Respondent,

v.

SEARIVER MARITIME INC.,

Defendant and Appellant.

A122449

(San Francisco County
Super. Ct. No. CGC-06-449350)

This is an appeal from the final judgment after the jury awarded plaintiff Mack Shelby \$8 million in damages for harm sustained from exposure to petroleum products containing benzene and other hydrocarbons while employed as an able-bodied seaman by defendant SeaRiver Maritime Inc., formerly named Exxon Shipping Company (SeaRiver). SeaRiver seeks reversal of the judgment on grounds that include insufficient evidence of causation, excessive damages, and attorney misconduct during closing arguments. For reasons to be explained, we affirm the judgment.

FACTUAL AND PROCEDURAL BACKGROUND

In 1987, plaintiff became employed by Exxon Shipping Company, which was later renamed SeaRiver. Prior to this time, plaintiff served four years in the Navy and 12 years as an able-bodied seaman with Sabine Towing.

I. Plaintiff's Service as an Able-Bodied Seaman for SeaRiver.

When hired by SeaRiver, plaintiff was given a medical examination and found to be in good health, with no blood abnormalities or other physical limitations. Throughout

his employment, SeaRiver supervisors rated plaintiff's work performance highly, describing him as "extremely conscientious" with "exceptional" safety consciousness.

Initially, from 1987 to 1991, plaintiff worked as an able-bodied seaman on SeaRiver tankers, including the *Galveston*, transporting crude oil from Alaska oil fields to California refineries. Plaintiff's tasks on these tankers included loading and discharging crude oil and other cargo, connecting hoses, cleaning tanks, and measuring oil levels in the tanks and then topping them off, a process known as "ullaging."

In 1991, plaintiff began working on the *Wilmington*, a tanker that transported a variety of chemicals, including heart-cut reformat, methyl ethyl ketone and naptha, up the Atlantic Coast from Louisiana to New York. After 1994, the *Wilmington* carried heart-cut reformat, a particularly toxic chemical, on every trip.¹

II. Plaintiff's Occupational Exposure to Benzene and Other Hydrocarbons.

On both the *Galveston* and *Wilmington*, plaintiff worked with petroleum products containing benzene, a known carcinogen, and other hydrocarbons. Benzene is a clear, colorless, non-corrosive, highly flammable liquid, found naturally in a variety of plant and animal life, including strawberries. First used in the rubber industry before World War I, benzene or liquids containing benzene are used in the chemical, printing, lithograph, rubber cement, rubber fabricating, paint, varnish, stain remover, adhesive and petroleum industries. Crude oil naturally contains up to 3.0 percent benzene by volume, while heart-cut reformat contains 50 percent benzene by volume.

Benzene is one of a few carcinogens to have a "cumulative effect," whereby doses of benzene continue to accumulate in the human body over time. While individual susceptibility to benzene varies significantly, it has been "linked to leukemia, aplastic anemia (an often fatal disease of the bone marrow) and to the suppression (decrease) of

¹ Plaintiff left SeaRiver in 1994 to operate his own shrimp boat, but was rehired in 1996 after his shrimping venture proved unsuccessful. At the time, plaintiff's supervisor called his rehiring a reward for "outstanding performance" and described him as "among the best this company has to offer in the unlicensed ranks."

various vital elements of the blood (red blood cells, white blood cells and platelets). These are diseases which are related to chronic exposures.”

According to SeaRiver’s 1996 Safety and Health Manual, “[c]hronic effects may result from low-level exposure[s] [to benzene] over an extended period of time. The effect of chronic low-level exposures may not be evident for some time after the initial exposure. Emphasis is being placed on chronic hazards, those whose effects generally begin to emerge well after the initial exposure – sometimes 10 to 30 years. Examples of chronic conditions are: [¶] Cancer (skin, lung, digestive, genito-urinary); [¶] Blood diseases such as anemia and leukemia; [¶] male and female reproductive effects; [¶] Internal organ damage (e.g., lung, kidney and liver); and [¶] Nervous system deterioration.”

In the late 1980’s, anticipating a Coast Guard decision to lower the permissible exposure limits (PEL) to benzene to 1.0 parts per million (ppm) on average over an eight-hour period and to 5.0 ppm on average over any 15 minute period, SeaRiver began a program to monitor benzene exposures, as well as overall hydrocarbon exposures, of seamen involved in transporting crude oil on SeaRiver vessels. (46 C.F.R., § 197.505.)² The program involved random monitoring of both individual seamen and designated areas onboard the tankers.

The resulting report, published in 1991, found that “[a]pproximately 19% of the samples taken on personnel and about 13% of area samples taken on deck and in other locations measured concentrations in excess of 1 ppm (PEL). . . However, results typically represent periods less than 8 hours duration and are not corrected to 8-hour

² Under these revised Coast Guard regulations, which became effective in 1992, “No person may be subjected to a personal exposure in excess of the permissible exposure limits unless respiratory protection is used.” (46 C.F.R., § 197.520.) The regulations also require warnings that respiratory protection is mandatory in delineated areas where benzene levels “can be expected to exceed the permissible exposure limits” (46 C.F.R., § 197.535, subd. (a)), and require regular medical monitoring for any employee “who may reasonably be expected to be exposed to benzene at or above the action level [0.5 ppm] on at least 30 calendar days, or at a level above a PEL on at least 10 calendar days, during the coming year.” (46 C.F.R., § 197.560, subd. (b)(2)(ii).)

time-weighted averages (assuming that any remaining time periods represent non-exposure). Conservative interpretation assumes that personnel may be exposed to measured concentrations up to eight hours.”

The report further found that “[o]nly 4 loading surveys (out of 34) produced results where all sample results were less than 1 ppm benzene. . . .” In areas presumed to have minimal exposures, such as the crew quarters, engine rooms and pump rooms, concentration levels were found to be between 0.5 and 1 ppm in certain instances. This prompted acknowledgment that, while these areas “[u]sually” experienced very low hydrocarbon levels, ventilation “may not always be operated in an optimum mode.”

On the other hand, concentration levels of benzene greater than 1 ppm were more likely to exist “while . . . topping off tanks, particularly when winds are light . . . , [¶] [d]uring final gauging of tanks, . . . [¶] [w]hile working in the vicinity of cargo hoses or loading arms . . . [¶] [w]here bullets are manually bypassed or purge pipes are vented during loading and top-off . . . [and] [¶] [d]uring the latter stages of loading operations”³ The report recommended that seamen wear respiratory protection during each of these operations.

After release of this report, SeaRiver continued the benzene monitoring program, including medical monitoring of individuals considered at risk of regular exposure to more than 1.0 ppm of benzene. In particular, consistent with the newly revised Coast Guard regulations, once an individual’s exposure reached the “action level” of 0.5 ppm during an eight-hour period, he was required to go into SeaRiver’s medical monitoring program to have annual blood work performed, with mandatory follow-up testing if the blood work revealed blood cell counts outside normal range.

In or around 1998, plaintiff was referred for medical monitoring under this program. Thereafter, certain of plaintiff’s medical records indicated declines in his blood cell counts. For example, between 1998 and 1999 or 2000, plaintiff’s white blood cell

³ The report noted the three critical factors that most influence benzene concentration levels on deck during the loading process are wind speed and direction, the loading stage, and the particular ship’s characteristics of operation.

count dropped from 9,500 to 6,300, and his platelet count dropped from 480,000 to 284,000. However, after plaintiff was retested by a physician under the program, his counts improved and he was authorized to continue working as an able-bodied seaman.

III. Plaintiff Files This Lawsuit.

In 2003, plaintiff was diagnosed with kidney cancer, ultimately requiring removal of his right kidney. After taking a six-month medical leave of absence to address his condition, plaintiff returned to work with SeaRiver. However, shortly thereafter, plaintiff suffered two hernias near the incision site of his kidney operation, requiring additional time off. Plaintiff eventually returned again to work with SeaRiver, however he experienced high cholesterol and gout, a painful condition caused by the buildup of uric acid in the body. Plaintiff began taking several new medications for these conditions, gained weight, and experienced constant worry that his cancer would return. Plaintiff also experienced permanent weakness on his side at the incision site, reduced overall strength, reduced production of a protein that stimulates red blood cell development, and reduced ability to properly eliminate insulin.

In 2006, plaintiff brought this action, asserting claims against SeaRiver under the Jones Act (see 46 U.S.C. § 30104) (Jones Act), and general maritime law. According to the complaint, plaintiff sought damages based upon SeaRiver's alleged failure to comply with federal regulations governing benzene exposure levels, to warn him of the health risks of exposure to benzene and other hydrocarbons, and to provide him with appropriate protective equipment to abate these risks. Plaintiff reasoned that, because of these failures, he was over-exposed to benzene and other hydrocarbons on SeaRiver vessels, leading to the loss of his right kidney and other related health problems.

On April 29, 2008, trial began in San Francisco County Superior Court, during which plaintiff testified regarding his typical day at work as a SeaRiver able-bodied seaman. According to this testimony, plaintiff generally worked four-hour shifts on the tankers, followed by eight hours off duty. During these shifts, plaintiff regularly engaged in tasks placing him in close proximity to benzene. These tasks included the loading process, when he would pump oil caught from the hoses into a dirt pan and then into

another tank; during loading or sailing, when vent caps would sometimes open and release vapors for between 30 seconds to 30 minutes in order to permit displaced air and gas to escape as the tanks were filled with oil; and the topping off or ullaging process, which could take four hours and required him to measure with a 120-foot fiberglass tape, the oil level as it rose to the top of the tank.

Plaintiff described vapor clouds that would settle on deck and below deck during these processes, causing the men to complain of headaches and nausea. Nonetheless, while working with crude oil on the *Galveston* between 1987 and 1991, plaintiff recalled receiving no special training on benzene and was not provided with a respirator to use when handling the cargo. When spills occurred onboard, such as during the tank cleaning process, plaintiff and his fellow seamen were not told that the spills could result in unsafe exposure to benzene vapors, or given instructions on how to abate this danger.

In 1992, after joining the *Wilmington*, plaintiff was finally fitted with a respirator. However, he was directed to wear it only when handling heart-cut reformat, the highly dangerous product containing 50 percent benzene by volume. Plaintiff always wore the respirator when handling heart-cut reformat to protect against the vapors, but recalled being sprayed at times directly with the chemical, requiring him to shower and change clothes immediately. SeaRiver did not test him after these incidents, and did not tell him benzene could be absorbed by the body through the skin. Finally, in 1996, plaintiff first received benzene awareness training.

A fellow able-bodied seaman, Charles Pollard, who worked on SeaRiver tankers in the Alaska trade from 1977 to 1990, and thereafter on the *Wilmington* in the east coast trade, testified that he was not told to wear a respirator when working with crude oil prior to 1995. Like plaintiff, Pollard recalled being exposed to fumes when loading, discharging or measuring the cargo, cleaning the tanks, and connecting or disconnecting the hoses. Pollard recalled that measuring the tanks as they were filled with crude oil sometimes took an entire four-hour shift. His complaints to supervisors about exposure to fumes during this time went unheeded. It was not until the *Wilmington* began

transporting heart-cut reformat in 1994 that the seamen were told to wear respirators, and then only when handling that chemical.⁴

Dr. Nelson Avery, a board certified specialist in internal medicine, occupational medicine and medical toxicology, and faculty member of the University of Texas, Galveston, served as plaintiff's causation expert. Before trial, SeaRiver moved to exclude Dr. Avery's testimony for lack of foundation, but this motion was denied. At trial, Dr. Avery testified "based on reasonable medical probability" that plaintiff's kidney cancer was "most likely" caused by his occupational exposures to benzene and other hydrocarbons on SeaRiver vessels. Dr. Avery also testified that these benzene exposures damaged plaintiff's hematological system, causing a reduced ability to properly eliminate insulin and a buildup of uric acid levels triggering painful gout episodes. Dr. Avery recommended that plaintiff not continue to work around benzene and assigned him a five percent chance of recurring cancer in the next five years.

To rebut Dr. Avery's testimony, SeaRiver called Dr. Richard Irons, a certified expert in toxicology who had studied the toxicity of benzene for 30 years.⁵ Dr. Irons testified that exposure to benzene has not been proven to cause kidney cancer, and could not have caused plaintiff's kidney cancer. Specifically, Dr. Irons explained that, based upon his review of peer-reviewed scientific studies, the "epidemiology literature . . . does

⁴ William Schaefer, a registered nurse who served as an occupational health specialist at SeaRiver, later disputed the testimony of plaintiff and Pollard that SeaRiver failed to train its workers on the dangers of benzene and other hydrocarbons. Among other things, Schaefer testified that, under the company's health and safety program, all employees attended a 3-day orientation training session covering industrial hygiene and occupational safety, that each ship's master thereafter conducted monthly vessel safety meetings, and that hazard communications and copies of the Ocean Fleet Safety Manual were circulated to employees onboard the vessels. Schaefer noted, however, that even though the safety manual called for protective equipment during certain tasks, seamen had individual responsibility for actually wearing it.

⁵ For the past nine years, Dr. Irons has studied the epidemiology of benzene in human populations in China. This study is a collaboration between the University of Colorado, Fudan University in China, and other groups, and is being funded by five petroleum companies, including Exxon Mobil.

not show significant consistent evidence of a relationship between benzene and the development of clear cell carcinoma of the kidney or any other kidney cancer.”

Following trial, the jury found plaintiff’s kidney cancer and related health problems were caused by SeaRiver’s failure to provide him a safe place to work and to maintain seaworthy vessels. The jury awarded plaintiff a total of \$8 million, consisting of \$1.125 million in past non-economic damages, \$350,000 in future economic damages and \$6.525 in future non-economic damages.

SeaRiver then moved for judgment notwithstanding the verdict or, alternatively, for a new trial, arguing that Dr. Avery’s causation opinions lacked foundation and were not supported by substantial evidence that benzene exposure could have caused plaintiff’s harm. SeaRiver also argued that the jury’s awards for future pain and suffering and future economic loss were not supported by substantial evidence, and that a new trial was required to address the excessive damage awards and the related attorney misconduct. The trial court denied these motions, prompting this timely appeal.

DISCUSSION

SeaRiver raises three primary arguments on appeal. First, SeaRiver contends the evidence in this case fails to prove plaintiff’s occupational exposure to benzene or other hydrocarbons caused his kidney cancer or other harm. Second, SeaRiver contends the evidence fails to support the jury’s award of future economic damages because plaintiff continued to work for SeaRiver and medical doctors declared him fit for duty. Third, SeaRiver contends the jury’s award of future pain and suffering was excessive as a matter of law, and therefore must be reversed. We address each contention in turn below.

I. Evidence of Causation.

In cases brought under the Jones Act, “legal cause is proven when an employer’s negligence plays ‘any part, even the slightest, in producing the injury or death for which damages are sought.’ (*Rogers v. Missouri Pacific R. Co.* (1957) 352 U.S. 500, 506 [1 L.Ed.2d 493, 499, 77 S.Ct. 443].)” (*Tinsley v. American President Lines, Ltd.* (1992) 6 Cal.App.4th 562, 567. See also *Catania v. Halcyon Steamship Co.* (1975) 44 Cal.App.3d

348, 356 [causation exists in Jones Act cases if there is any evidence to “ ‘justify with reason the conclusion that employer negligence played any part, even the slightest, in producing the injury. . . .’ ”].)⁶

For purposes of this case, the Jones Act causation rule co-exists with causation rules governing toxic tort cases more generally. In particular, to recover in a toxic tort case, a plaintiff must demonstrate both “exposure to a defendant’s product and biological processes from the exposure which result in disease.” (*Lineaweaver v. Plant Insulation Co.* (1995) 31 Cal.App.4th 1409, 1415-1416. See also *Jones v. Ortho Pharmaceutical Corp.* (1985) 163 Cal.App.3d 396, 405-406 [plaintiff has the burden to prove defendant’s product caused the development or aggravation of plaintiff’s cancer].)

In this case, plaintiff offered Dr. Avery as a causation expert. Dr. Avery’s opinion had two primary components. First, Dr. Avery opined that, as a general matter, exposure to benzene can cause kidney cancer (otherwise known as renal cell carcinoma). Second, Dr. Avery testified that plaintiff’s exposure to benzene and other hydrocarbons on SeaRiver tankers caused his particular case of kidney cancer.

On appeal, SeaRiver does not challenge Dr. Avery’s expertise in the relevant fields of internal medicine, occupational medicine and medical toxicology. Rather, SeaRiver contends Dr. Avery’s causation opinions are based on “factors that are speculative, remote, or conjectural,” and thus do not constitute substantial evidence, citing to *Lockheed Litigation Cases* (2004) 115 Cal.App.4th 558.

In determining whether SeaRiver’s contentions have merit, we find relevant the following legal principles governing expert testimony. “California law permits a person with ‘special knowledge, skill, experience, training, or education’ in a particular field to qualify as an expert witness (Evid. Code, § 720) and to give testimony in the form of an opinion (*id.*, § 801).” (*People v. Gardeley* (1996) 14 Cal.4th 605, 617.) However,

⁶ “State courts have concurrent jurisdiction with federal courts to entertain and try actions pleaded pursuant to the Jones Act and the general maritime law.” (*Baptiste v. Superior Court* (1980) 106 Cal.App.3d 87, 94.) “The prevailing rule is that, regardless of the forum, federal substantive law applies.” (*Ibid.*)

“Evidence Code section 801 limits expert opinion testimony to an opinion that is ‘[b]ased on matter . . . perceived by or personally known to the witness or made known to [the witness] at or before the hearing, whether or not admissible, that is of a type that reasonably may be relied upon by an expert in forming an opinion upon the subject to which [the expert] testimony relates’ (*Id.*, subd. (b).)” (*People v. Gardeley*, *supra*, 14 Cal.4th at p. 617.)

Thus, as Evidence Code section 801 reflects, “ ‘the law does not accord to the expert’s opinion the same degree of credence or integrity as it does the data underlying the opinion.’” (*People v. Gardeley*, *supra*, 14 Cal.4th at p. 618.) “Like a house built on sand, the expert’s opinion is no better than the facts on which it is based.’ [Citation]” (*Id.* at p. 618.) Put quite simply: “An expert opinion has no value if its basis is unsound.” (*Lockheed Litigation Cases*, *supra*, 115 Cal.App.4th at p. 564.)

However, “[s]o long as this threshold requirement of reliability is satisfied, even matter that is ordinarily *inadmissible* can form the proper basis for an expert’s opinion testimony. [Citations.] And because Evidence Code section 802 allows an expert witness to ‘state on direct examination the reasons for his opinion and the matter . . . upon which it is based,’ an expert witness whose opinion is based on such inadmissible matter can, when testifying, describe the material that forms the basis of the opinion. [Citations.]” (*People v. Gardeley*, *supra*, 14 Cal.4th at pp. 618-619.)⁷

A. Dr. Avery’s Opinion that Benzene Can Cause Kidney Cancer.

In opining that benzene exposure can lead to kidney cancer, Dr. Avery explained the relevant biological process as follows. Benzene, when inhaled, is absorbed into the blood stream, where it is then circulated throughout the human body to, among other

⁷ A trial court “has considerable discretion to control the form in which the expert is questioned to prevent the jury from learning of incompetent hearsay.” (*People v. Price* (1991) 1 Cal.4th 324, 416.) The trial court also has discretion “to weigh the probative value of inadmissible evidence relied upon by an expert witness . . . against the risk that the jury might improperly consider it as independent proof of the facts recited therein.” (*People v. Coleman* (1985) 38 Cal.3d 69, 91.)

places, the liver.⁸ When the benzene enters the liver, it undergoes a process of metabolism, whereby it is transformed into “metabolites,” one of which is a highly toxic compound called phenol. These metabolites can then enter the blood stream and travel to, among other places, the bone marrow, where they can affect “stem cells,” which are responsible for making red blood cells, white blood cells and platelets (i.e., the primary components of blood).

The phenol and other metabolites can also travel through the blood stream to the renal artery, where they are filtered through the kidney, the organ responsible for ridding the human body of waste. After passing from the kidney to the bladder, the metabolites ultimately leave the body in the form of urine.⁹ According to Dr. Avery, this process “gives the[] [metabolites] an opportunity to injure the kidney directly and to have a carcinogenic effect. So it’s gotten, really, a potential for two things. One is a direct toxic effect on the cell, where it can kill it, and the other is, it can ultimately be a carcinogen.”

In offering this theory, Dr. Avery acknowledged that, while it is generally accepted in the scientific community that exposure to benzene can cause acute myelogenous leukemia (AML) and other blood diseases, the same cannot be said with respect to renal cell carcinoma. Rather, the scientific community remains at odds regarding the relationship, if any, between benzene and renal cell carcinoma. In particular, Dr. Avery reviewed about 35 peer-reviewed scientific articles, most of which found the evidence of a causal relationship between benzene exposure and renal cell carcinoma inconclusive, nonexistent, or not statistically significant.¹⁰ However,

⁸ The human body retains about half of the amount of benzene that is inhaled; the other half is expelled by exhalation.

⁹ For this reason, a person’s benzene exposure is often determined by measuring the level of phenol in his or her urine.

¹⁰ For example, Dr. Avery acknowledged a study entitled “Health Effects of Gasoline Exposure” by Dr. Otto Wong, which concluded “the results of this study indicate that there was no increased mortality from kidney cancer among marketing and marine distribution employees in the petroleum industry who were exposed to gasoline when compared to the general population.” Similarly, a study by McReady and Stewart, “Risk Factors for Kidney Cancer in New South Wales,” found “no association” between

Dr. Avery did find about five or six articles supportive of his theory that benzene exposure can cause the disease. For example:

- A public health study by the Canadian Cancer Registry, “Renal Cell Carcinoma and Occupational Exposure to Chemicals in Canada,” found that people exposed to “benzene and some other materials . . . had an increased frequency of having cancer of the kidney. They had about a 180 percent increase over what would have been expected.”
- An article by H. Saarni, “Cancer at Sea, a Case-Controlled Study Among Male Finnish Seafarers,” found a linear relationship “between the employment time, in this case, on a ship, and developing [renal cell carcinoma].”¹¹
- A study published by the Norwegian Cancer Registry, “Mortality Among Seamen with Special Reference to ‘Work on Tankers,’ ” found “an increased incidence of cancer for chemical tanker seamen,” particularly those seaman who worked on deck.
- An article published by the Danish Cancer Registry, entitled “Occupational Risk Factors for Renal Cell Carcinoma in Denmark,” studied workers employed in the oil and gasoline distribution system and, according to Dr. Avery, provided “support for the fact that gasoline, which is a benzene-containing product, and other benzene-containing hydrocarbons, increase your rate of kidney cancer.”
- An article in the Annals of the New York Academy of Sciences, “An Open Communication about Occupational Kidney Cancer and Exposure to Industrial Solvents,” contained a tabular analysis of about 20 professional publications that

renal cell carcinoma and working in the petroleum, steel and iron industries, concluding that “[t]he increased risks seen for those exposed to other petroleum products, and to cutting oils and mists, disappeared when adjustment was made in the analysis for other risk factors.”

¹¹ Dr. Avery acknowledged on cross-examination that the study found “deck officers” had a 2.15 odds ratio with respect to kidney cancer after more than three years of exposure. “Deck crew,” on the other hand, had only a .73 odds ratio after more than three years of exposure.

“support[ed] the proposition that renal cell cancer is increased by exposure to hydrocarbons.”

On appeal, SeaRiver challenges both Dr. Avery’s theory that benzene exposure causes kidney cancer and his reliance on these five or six articles.¹² In particular, SeaRiver notes that: (1) the majority of the 35 peer-reviewed scientific studies either disagree with Dr. Avery’s theory, or find insufficient evidence to support it; and (2) those studies relied upon by Dr. Avery to support his theory were conducted under circumstances distinguishable from this case.

In raising these challenges to Dr. Avery’s theory, SeaRiver focuses on the testimony of its own causation expert, Dr. Irons, whose expertise in the toxicity of benzene was accepted without objection. Dr. Irons agreed with Dr. Avery that benzene, after entering the body, is broken down in the liver into metabolites, some of which are highly toxic. However, contrary to Dr. Avery, Dr. Irons testified that the “kidney plays almost no measurable role in the primary metabolism of benzene.” Dr. Irons also disagreed with Dr. Avery that phenol is highly toxic, at least at the concentrations produced when benzene is metabolized. Rather, other metabolites known as “quinones” are much more highly toxic and have an adverse effect on bone marrow, which can lead to various blood diseases, but these compounds are not found in sufficient concentrations in the kidney to “cause trouble” there. Further, while Dr. Avery testified that benzene exposures above 1.0 ppm are harmful to humans, Dr. Irons believed such exposures are harmful only above 10 ppm.

Finally, with respect to the current thinking of the scientific community, Dr. Irons testified that the “epidemiology literature . . . does not show significant consistent evidence of a relationship between benzene and the development of clear cell carcinoma of the kidney or any other kidney cancer.”¹³ In other words, Dr. Irons surmised, there

¹² The articles themselves were not admitted into evidence based upon SeaRiver’s sustained hearsay objection.

¹³ Epidemiology is the study of the incidence or prevalence of a particular disease in a given human population.

currently is no credible, scientific evidence supporting Dr. Avery's theory that benzene exposure causes kidney cancer. On the other hand, Dr. Irons acknowledged that benzene exposure can cause a variety of blood diseases, such as leukemia; however, "what is the dose of benzene that is associated with the development of specific diseases is still open to question under certain circumstances and certain exposure[s]."

Relying on this testimony by Dr. Irons, SeaRiver argues that Dr. Avery's general causation theory lacks all probative value. SeaRiver reasons that expert opinions based on speculation or conjecture are not admissible, and that matter, such as scientific articles, that may provide a reasonable basis for one opinion "does not necessarily provide a reasonable basis for another opinion." (*Lockheed Litigation Cases, supra*, 115 Cal.App.4th at p. 564.)

While we agree with these principles as a general matter, we disagree they require wholesale rejection of Dr. Avery's theory in this case. In particular, the fact that Dr. Irons disagrees with Dr. Avery's theory that benzene exposure can directly harm kidney function is not proof that Dr. Avery's theory is mere speculation or conjecture. As the record reflects, Dr. Avery relied on his extensive professional background in internal medicine, occupational medicine and toxicology, as well as the identified peer-reviewed scientific studies, to opine that benzene exposure can play a causal role in the development of kidney cancer.

Moreover, SeaRiver correctly notes that Dr. Avery acknowledged that, in many of these studies, the exact level of benzene exposures experienced by the subjects "may or may not have [been] known." "They just know that they were around solvents that contained benzene, or around petroleum that had benzene in it." However, Dr. Avery explained that, given the occupations of the studies' subjects, they (like plaintiff) must have had "some exposure times that would have been above one part per million," the level he considered statistically significant. SeaRiver has offered nothing to prove this explanation was unreasonable. On SeaRiver's objection, the studies themselves were not admitted into evidence. As such, we are not in a position to question Dr. Avery's testimony on this issue based upon review of those studies. However, to the extent

SeaRiver believed that Dr. Avery's testimony on this issue was unreasonable or speculative, defense counsel had the opportunity to demonstrate such fact on cross-examination. Having reviewed the record, however, we find no evidence that SeaRiver did so.

SeaRiver also correctly notes that Dr. Avery acknowledged one of the studies, that which related to the Finish seafarers, conceded seafarers are often heavy drinkers and exposed to other carcinogens such as asbestos, cigarette smoking, styrene and paint pigment, which may help explain their higher incidence of kidney cancer. As such, Dr. Avery agreed that this study supported only the proposition that Finnish seafarers, exposed to varying amounts of chemicals in addition to benzene, experienced a higher rate of kidney cancer.

Yet while these acknowledgements by Dr. Avery may detract from the weight to be afforded his opinions, they do not strip his opinions of all probative value, or render unreasonable his reliance on these and other scientific studies supportive of his opinions. For example, in arguing that Dr. Avery's opinions are too speculative and conjectural to be probative, SeaRiver relies on *Lockheed Litigation Cases*, *supra*, 115 Cal.App.4th 558. There, the court rejected as speculative an expert opinion that the defendant's chemicals caused cancer where it was based on a single study that "did not indicate whether any single chemical contributed to an increased risk of cancer," but merely "showed that painters who potentially were exposed to a long list of more than 130 substances and thousands of chemical compounds contracted cancer at a rate greater than the national average." (*Id.* at p. 564.) Here, to the contrary, Dr. Avery relied on studies including the Canadian Cancer Registry study entitled "Renal Cell Carcinoma and Occupational Exposure to Chemicals in Canada," which specifically found that people exposed to *benzene* had a 180 percent increase in the frequency of kidney cancer compared to the general population. SeaRiver emphasizes that this study also considered several other chemicals, but does not ultimately dispute its finding regarding benzene. Nor does SeaRiver dispute that the study was peer-reviewed and conducted with support from the Canadian government in order to promote public health. And while Dr. Avery

acknowledged on cross-examination that the author of this Canadian study suggested further study should be done to clarify its findings, this acknowledgment does not undermine the legitimacy of the findings. Under these circumstances, we disagree that Dr. Avery's reliance on this study was unreasonable.

Moreover, we also find noteworthy that SeaRiver does not challenge the underlying trustworthiness of any of the studies relied upon Dr. Avery, much less his qualifications to interpret their contents or to assess their relevance. Rather, SeaRiver claims Dr. Avery's reliance on these studies was unreasonable because of the overall lack of consensus in the scientific community regarding benzene's relationship to kidney cancer. However, California law does not require absolute consensus among scientists as a prerequisite for recognizing a causal link. As *People v. Cegers* explains, "[a]n expert may always give his opinion as to the cause of a particular injury or condition, and lack of absolute scientific certainty does not constitute a basis for excluding the opinion." (*People v. Cegers* (1992) 7 Cal.App.4th 988, 998, quoting *People v. Mendibles* (1988) 199 Cal.App.3d 1277, 1293-1294. See also *People v. Phillips* (1981) 122 Cal.App.3d 69, 86.)¹⁴

Ultimately, the fact that other peer-reviewed studies reach contrary conclusions, call for further research, or were conducted under circumstances in certain ways distinguishable from those at hand, does not render an expert opinion speculative or baseless. Rather, these facts are relevant to the probative weight of the opinion, which remains a matter for the jury rather than this court. (*Kelley v. Trunk* (1998) 66

¹⁴ California law requires "substantial agreement and consensus in the scientific community" regarding the reliability of a new or novel scientific process before evidence derived from the new or novel process may be admitted at trial. (*People v. Kelly* (1976) 17 Cal.3d 24, 31.) However, there is nothing new or novel about the process employed by Dr. Avery in this case – to wit, relying on scientific literature to support a medical diagnosis. As such, substantial agreement and consensus in the scientific community was not a prerequisite for admitting his testimony. (*People v. Cegers, supra*, 7 Cal.App.4th at p. 998 ["[a] medical diagnosis based on medical literature will not be viewed as a new scientific technique, but simply the development of an opinion from studies of certain types of cases' "].)

Cal.App.4th 519, 524 [when competent experts present opposing opinions, the jury must decide “[w]hich expert opinion [i]s correct”).¹⁵

Accordingly, based on the record set forth above, we conclude the trial court properly accepted into evidence Dr. Avery’s opinion that benzene exposure can cause kidney cancer.

B. Dr. Avery’s Opinion that Benzene Caused Plaintiff’s Kidney Cancer.

Still to be determined is whether Dr. Avery’s opinion that benzene exposure caused plaintiff’s particular kidney cancer, together with other relevant evidence in the record, constitutes substantial evidence of specific causation. “In toxic tort cases generally, ‘plaintiffs must establish, to a *reasonable medical probability*, *their illnesses* were caused by the toxic exposure. The fact the chemicals increased the possibility of sickness in the overall population does not suffice to provide a causal link with plaintiffs’ illnesses.’ (Flahavan et al, Cal. Practice Guide: Personal Injury, *supra*, [¶] 2:985.1, p. 2-316.4.)” (*Whiteley v. Philip Morris, Inc.* (2004) 117 Cal.App.4th 635, 701.) “Increased risk alone is not actionable.” (*Ibid.*)

Several factors are relevant in assessing the medical probability that exposure to a specific toxin contributed to a plaintiff’s disease. “Frequency of exposure, regularity of exposure, and proximity of the [toxin] to plaintiff are certainly relevant, although these considerations should not be determinative in every case. [Citation.] Additional factors may also be significant in individual cases, such as the type of [toxin] to which plaintiff was exposed, the type of injury suffered by plaintiff, and other possible sources of plaintiff’s injury. [Citation.] ‘Ultimately, the sufficiency of the evidence of causation will depend on the unique circumstances of each case.’ [Citation.]” (*Lineaweaver, supra*, 31 Cal.App.4th at pp. 1416-1417.)

¹⁵ We note that Dr. Irons was very effectively cross-examined regarding his links (financial and professional) to the petroleum industry, providing the jury with a valid basis for questioning his neutrality when opining that benzene exposure does not lead to kidney cancer. For example, Dr. Irons acknowledged to the jury that his extensive benzene study is being funded by five petroleum companies, including Exxon Mobil.

Relevant here, Dr. Avery opined to a reasonable degree of medical probability that plaintiff's kidney cancer was caused by his occupational exposure to benzene. His opinion was based in part upon plaintiff's occupational history, which established that, as a SeaRiver able-bodied seaman, he was regularly exposed to "fairly significant amounts of benzene" from 1987 to 1991 while working on the *Galveston* and other vessels transporting crude oil from Alaska to California refineries, and from 1993 to 2005 while on the *Wilmington* transporting heart-cut reformat (with the exception of the period from 1994 to 1996 when plaintiff was self-employed).¹⁶

As further support for his opinion, Dr. Avery examined the studies conducted by SeaRiver in 1990 and 1991 that measured benzene levels, as well as total hydrocarbon levels, on individual employees and in specific areas onboard tankers travelling from Alaska to the California coast, including the *Galveston*.¹⁷ The results of these studies included the following exposures: 1.086 ppm benzene for 245 minutes while loading; 1.687 ppm benzene for 25 minutes during final gauging; 1.109 ppm benzene for 1,206 minutes while loading; and an area exposure of 6.408 ppm benzene for 386 minutes. While the individual seamen who experienced these exposures were not identified by name, Dr. Avery nonetheless believed their exposures were "reflective of what [plaintiff's] exposure would have been" because these seamen were handling the same cargo and performing the same or similar tasks as plaintiff.

In linking plaintiff's kidney cancer to benzene to a reasonable medical probability, Dr. Avery also examined some of plaintiff's blood work that had been performed under SeaRiver's benzene-monitoring program. In doing so, Dr. Avery noted potential irregularities he believed were related to benzene exposure. For example, between 1998

¹⁶ Dr. Avery met with plaintiff for a half day and spent additional time reviewing records of his personal, medical and occupational history.

¹⁷ These studies, as described above, anticipated the revised Coast Guard standard limiting an individual's benzene exposure over an eight-hour period to no more than one ppm, with an "action level" of 0.5 ppm. At this action level, individuals were required to go into a benzene surveillance program to have annual blood work performed, with mandatory follow-up testing if the blood work was outside normal range.

and 1999 or 2000, plaintiff's blood work was found to be within normal range, but his white blood cell count dropped from 9,500 to 6,300 and his platelet count dropped from 480,000 to 284,000, prompting SeaRiver to suggest further medical evaluation for plaintiff.¹⁸

Dr. Avery also found significant that plaintiff did not have any other of the known risk factors for kidney cancer. These other risk factors include, for example, a history of cigarette smoking (which causes as much as 25 to 30 percent of all incidents of kidney cancer), heavy drinking, obesity, and exposure to other carcinogens such as cadmium or asbestos.¹⁹

Finally, Dr. Avery considered the fact that Pollard, plaintiff's fellow seamen working with heart-cut reformat on the *Wilmington*, also developed kidney cancer. Dr. Avery conceded this fact had no "statistical significance," yet believed it "would raise an eyebrow" given the relative rarity of this particular disease.

SeaRiver dismisses this evidence as insufficient to prove plaintiff's kidney cancer was caused by benzene exposure. In doing so, SeaRiver first points out that Dr. Avery admitted that he did not attempt to evaluate or estimate in numeric terms the actual level of plaintiff's benzene exposure during his employment with SeaRiver. Dr. Avery also admitted that benzene occurs naturally in negligible amounts in a variety of plants and animals, including strawberries, and that measurements taken of plaintiff's benzene exposures on certain dates were likewise negligible. For example, SeaRiver documents reflect that plaintiff's benzene exposure on the *Wilmington* on April 2, 1990, after 205 minutes was .05 ppm, and in September 1992 after 228 minutes was .04 ppm.

However, despite SeaRiver's protestations, having reviewed the relevant California law, we have found no authority requiring a plaintiff in a toxic tort case to

¹⁸ Dr. Avery admitted on cross-examination that, in May 2006, a physician deemed plaintiff fit to return to work after performing blood work that was within normal range.

¹⁹ Benzene is one of over 200 carcinogens found in cigarette smoke. Dr. Avery opined that "cigarette smoking, which circulates carcinogens to your bloodstream – is . . . some evidence of the ability of carcinogens circulating through your bloodstream to cause kidney cancer."

present evidence of the exact numerical level of his or her exposure to the toxin to establish causation. Rather, a plaintiff must show only that the level of exposure to the compound was of a sufficient degree, based on “the unique circumstances of each case,” to support a reasonable inference that the exposure contributed in some material way to the plaintiff’s harm. (*Lineaweaver, supra*, 31 Cal.App.4th at pp. 1416-1417.)

Here, while SeaRiver correctly points out that Dr. Avery deemed only those benzene exposures above 1 ppm as capable of producing significant harm, he also noted that much of the scientific literature that he relied upon focused on length of exposure to benzene rather than actual dosage per exposure:

“I think what the literature supports is these exposures that are higher than this one part per million and the longevity of working on one of these ships. The surrogate – the substitution for those dosing numbers that we don’t have – is the length of exposure. All the research articles that I reviewed are about length of time. They’re not reflecting dosage.”

In this case, the evidence showed not only that benzene and other hydrocarbons were regularly present at plaintiff’s work sites during his 17-years of service on SeaRiver vessels, but also that these carcinogens were sufficiently prevalent to support a reasonable inference that plaintiff was harmfully exposed to them over the course of his service. In particular, the evidence proved that plaintiff regularly engaged in tasks – including loading crude oil, topping off or gauging tanks, and working in the vicinity of bullets or purge pipes being manually bypassed or vented – which SeaRiver’s own corporate documents identify as likely to involve concentration levels of benzene greater than 1 ppm, requiring respiratory protection. As noted above, for example, SeaRiver’s studies in 1990 and 1991 showed that an unidentified employee aboard its vessel in the Alaska trade was exposed to 1.687 ppm benzene for 25 minutes during the final gauging process, that another unidentified employee was exposed to 1.109 ppm benzene for 1,206 minutes during the loading process, and that an area of a vessel was exposed to 6.408 ppm benzene for 386 minutes. Nonetheless, despite these significant exposures, plaintiff and fellow seaman Pollard both testified that it was not until the *Wilmington* began

transporting heart-cut reformat in 1994 that the seamen were told to wear respirators, and then only when handling that particularly toxic chemical.

This evidence of the nature and extent of plaintiff's benzene exposures, considered together with evidence that benzene exposure has a cumulative effect in the human body and that individual susceptibility to benzene varies significantly, permits a reasonable inference that benzene contributed in some material way to his harm. California law required nothing more. (*Lineaweaver, supra*, 31 Cal.App.4th at pp. 1416-1417; *Greathouse v. Amcord, Inc.* (1995) 35 Cal.App.4th 831, 837.)

In reaching this conclusion, we acknowledge SeaRiver's challenge to Dr. Avery's testimony that plaintiff had no other known risk factors for kidney cancer other than his occupational exposure to benzene. For example, SeaRiver points to a 1997 medical report indicating that plaintiff had high blood pressure, a 1998 medical record indicating he was "a little bit overweight," a 1997 laboratory report showing high uric acid levels (which can lead to gout), and a medical report dated April 25, 2003, just six months before plaintiff's cancer diagnosis, containing a physician's note that he consumes "too much" alcohol.²⁰

However, SeaRiver's challenge in this regard provides no basis for reversing the judgment. To the extent any of these isolated pieces of plaintiff's medical history undermined Dr. Avery's overall opinion that, to a reasonable degree of medical probability, benzene caused his kidney cancer, the issue was for the jury to decide. (See *Sparks v. Owens-Illinois, Inc.* (1995) 32 Cal.App.4th 461, 477-478.) As we have already explained, the basis for Dr. Avery's causation opinions was not speculation or conjecture, but rather his review of over 35 peer-reviewed articles, his interview and examination of plaintiff, his review of plaintiff's medical and occupational records, and his specialized knowledge of benzene and how the human body reacts to it. (Cf. *Lockheed Litigation Cases, supra*, 115 Cal.App.4th at p. 564.)

²⁰ As mentioned above, Dr. Avery had attributed plaintiff's gout, which was diagnosed after surgery to remove his cancerous kidney, to his benzene exposure.

Thus, in summary, we conclude the record, considered as a whole, provided a reasonable basis for the jury's finding that SeaRiver's negligence in facilitating or failing to prevent plaintiff's exposure to harmful levels of benzene and other hydrocarbons during his 17 years of handling petroleum products and other chemicals on SeaRiver vessels played some part, however small, in his kidney cancer and related harm.

II. Evidence in Support of Future Economic Damages.

SeaRiver next challenges the jury's award of \$350,000 for future economic damages in the form of lost wages. Specifically, SeaRiver claims this award lacks evidentiary support because, after plaintiff's kidney was removed, he was undisputedly able to return to work as an able-bodied seaman for SeaRiver with his physician's approval.

“ ‘Under the prevailing American rule, a tort victim suing for damages for permanent injuries is permitted to base his recovery “on his prospective earnings for the balance of his life expectancy at the time of his injury *undiminished by any shortening of that expectancy as a result of the injury.*” [Citations.] . . . [R]ecovery of such damages is consistent with the general rule permitting an award based on the loss of future earnings a plaintiff is likely to suffer ‘because of inability to work *for as long a period of time in the future as he could have done had he not sustained the accident.*’ [Citation].” (*Fein v. Permanente Medical Group* (1985) 38 Cal.3d 137, 153.) However, to recover prospective damages, the tort plaintiff must prove “it is sufficiently certain that the detriment [*i.e.*, lost earnings] will occur.” (*Boeken v. Philip Morris USA, Inc.* (2010) 48 Cal.4th 788, 799. See also Civ. Code § 3283.)²¹

²¹ The Restatement is also instructive: “*d. Loss or impairment of earning capacity for the future.* The extent of future harm to the earning capacity of the injured person is measured by the difference, viewed as of the time of trial, between the value of the plaintiff's services as they will be in view of the harm and as they would have been had there been no harm. . . . Accordingly, the trier of fact must ascertain, as nearly as can be done in advance, the difference between the earnings that the plaintiff probably would or could have received during his life expectancy but for the harm and the earnings that he will probably be able to receive during the period of his life expectancy as now determined. In this computation, there are considered the type of work that the plaintiff

“ ‘Loss of earning power is an element of general damages that may be inferred from the nature of the injury, with or without proof of actual earnings or income either before or after the injury. [Citations.]’ ” (*Gargir v. B’Nei Akiva* (1998) 66 Cal.App.4th 1269, 1282.)

Consistent with these rules, the jury in this case was instructed to award damages for loss of future earnings if plaintiff proved “the amount of money he would have been *reasonably certain* to earn if the injury had not occurred.” (Emphasis added.) According to SeaRiver, plaintiff failed this burden because he presented “no evidence of [his] present inability to work at SeaRiver or anywhere else.” We turn to the record to decide whether SeaRiver’s contention has merit.

At trial, plaintiff testified that, at age 56, the only work he has done for 35 years and knows how to do is “going to sea.” Further, the only work of this type in the area where plaintiff lives, close to his elderly father, is that which SeaRiver has provided him. According to plaintiff, he “do[es] not want to keep working at this job, but [he] ha[s] no choice.”

After suffering two hernias at the site of his kidney removal incision and suffering various leg problems, plaintiff’s physician advised him not to return to work on the *Wilmington*, prompting his re-assignment to SeaRiver vessels running crude oil from Alaska. However, Dr. Avery testified at trial that plaintiff should “cease working around benzene” in light of his current physical condition.

This showing, we conclude, was sufficient to prove with reasonable certainty that, due to SeaRiver’s failure to provide a safe work environment, plaintiff’s capacity for future earnings has been seriously compromised. (*Fein, supra*, 38 Cal.3d at p. 153; *Gargir, supra*, 66 Cal.App.4th at p. 1282.) Specifically, the jury could have accepted plaintiff’s evidence that he has serious, ongoing medical concerns and physical

has done and the type of work that, in view of his physical condition, education, experience and age, he would have been doing and will be likely to do in the future during the working period of his life, together with all other matters reasonably relevant.” (Rest.2d Torts, § 924, com. d.)

limitations that affect his capacity to do this particular type of highly physical work, that he lacks the skills required to work in positions outside the petroleum shipping industry, and that he can only obtain the positions for which he is qualified in the area where he lives at SeaRiver. Moreover, SeaRiver presented no evidence at trial suggesting that plaintiff did in fact have other employment options, or that he was physically capable of continuing the same work he performed before his illness for the foreseeable future. As such, the jury's award to plaintiff of \$350,000 in future economic damages was reasonable, and will stand.

III. The Award for Future Pain and Suffering Damages.

Finally, SeaRiver challenges the jury's award of \$6.525 million for future pain and suffering as excessive as a matter of law. In doing so, SeaRiver claims this award was the product of the jury's passion and prejudice, engendered by plaintiff's counsel's improper closing arguments, which focused on SeaRiver's wealth and attacked its litigation tactics and integrity.

A jury may award a plaintiff "[r]easonable compensation for any pain, discomfort, fears, anxiety and other mental and emotional distress suffered by the plaintiff and caused by the injury [and for similar suffering reasonably certain to be experienced in the future from the same cause]. [¶] No definite standard [or method of calculation] is prescribed by law by which to fix reasonable compensation for pain and suffering. Nor is the opinion of any witness required as to the amount of such reasonable compensation. . . . [Rather,] [i]n making an award for pain and suffering [the jury] should exercise [its] authority with calm and reasonable judgment and the damages [the jurors] fix must be just and reasonable in the light of the evidence." (BAJI No. 14.13.)

Consistent with this rather flexible instruction for the jury, the central issue for the reviewing court is simply whether the jury's award is just and reasonable based upon the record before it. (*Beagle v. Vasold* (1966) 65 Cal.2d 166, 172; *Seffert v. Los Angeles Transit Lines* (1961) 56 Cal.2d 498, 508 ["The amount to be awarded is 'a matter on which there legitimately may be a wide difference of opinion' "].) "In assessing a claim that the jury's award of damages is excessive, we do not reassess the credibility of

witnesses or reweigh the evidence. To the contrary, we consider the evidence in the light most favorable to the judgment, accepting every reasonable inference and resolving all conflicts in its favor. *We may interfere with an award of damages only when it is so large that it shocks the conscience and suggests passion, prejudice or corruption on the part of the jury.*” (*Westphal v. Wal-Mart Stores, Inc.* (1998) 68 Cal.App.4th 1071, 1074 [emphasis added]; see also *Seffert, supra*, 56 Cal.2d at pp. 507-508.)

Further, “[a]lthough the trial court may weigh the evidence and grant a new trial or order a remittitur if it finds the jury’s award to be against the weight of the evidence, we are not so empowered.” (*Hasson v. Ford Motor Co.* (1982) 32 Cal.3d 388, 419.)

Here, the evidence viewed in the light most favorable to the judgment established that, in addition to the permanent loss of his kidney, plaintiff’s general health has been in decline since his cancer diagnosis. For example, plaintiff has experienced higher levels of cholesterol, painful episodes of gout, weight gain, permanent weakness on his side, reduced overall strength, reduced production of a protein that stimulates red blood cell development, and reduced ability to properly eliminate insulin. Plaintiff constantly worries that his cancer will return, a worry that was in fact substantiated by Dr. Avery, who assigned him a five percent chance of recurring cancer in the next five years.

Disputing this evidence was sufficient to support the size of the future pain and suffering award, SeaRiver relies on the following assertions by plaintiff’s counsel during argument as evidence that the award was the product of jury passion and prejudice.

A. Counsel’s Arguments Relating to SeaRiver’s Wealth.

In discussing economic damages in closing argument, plaintiff’s counsel made the following references to SeaRiver’s wealth that SeaRiver now relies upon to support its request for reversal of the judgment:

First, plaintiff’s counsel urged the jury to “imagine that you are the owner of an oil company, a tanker company, and you are very wealthy. You are making more money than you can say grace over”

Second, plaintiff’s counsel argued: “You’re making so much money, in fact, if we want to talk about the kind of money you’re making, you’re carrying a hundred – excuse

me, one million to one-and-a-half million barrels of oil in these super tankers, each one of them at a hundred dollars a barrel, that's a hundred million dollars”

Finally, counsel argued: “And it takes significant money to get the attention of a major corporation, the largest oil company in the world. . . . I would submit to you that if we asked for a million dollars in this case, that would be a whisper to this corporation to change. . . . But, we’re going to ask for 9 million dollars for this case because together with you all, and I need your help, I want to make a change. I want them to quit doing what they’re doing.”

In challenging these three lines of argument, SeaRiver points out that “a deliberate attempt by counsel to appeal to social or economic prejudices of the jury, including the wealth or poverty of the litigants” may constitute misconduct. (See *Hoffman v. Brandt* (1966) 65 Cal.2d 549, 552-553. See also *Brokopp v. Ford Motor Co.* (1977) 71 Cal.App.3d 841, 860.) We agree. However, “[g]enerally a claim of [attorney] misconduct is entitled to no consideration on appeal unless the record shows a timely and proper objection and a request that the jury be admonished. [Citations.] The purpose of the rule requiring the making of timely objections is remedial in nature, and seeks to give the court the opportunity to admonish the jury, instruct counsel and forestall the accumulation of prejudice by repeating improprieties, thus avoiding the necessity of a retrial. ‘It is only in extreme cases that the court, when acting promptly and speaking clearly and directly on the subject, cannot, by instructing the jury to disregard such matters, correct the impropriety of the act of counsel and remove any effect his conduct or remarks would otherwise have.’ [Citation.] In the absence of a timely objection the offended party is deemed to have waived the claim of error through his participation in the atmosphere which produced the claim of prejudice.” (*Horn v. Atchison, T. & S. F. Ry. Co.* (1964) 61 Cal.2d 602, 610.)²²

²² This waiver rule covers all claims of attorney misconduct, including those, like here, alleged to have resulted in excessive damages awarded by a jury inflamed by passion and prejudice. (*Horn, supra*, 61 Cal.2d at pp. 606, 610; *Ortega v. Pajaro Valley Unified School Dist.* (1998) 64 Cal.App.4th 1023, 1061 [rejecting on waiver grounds

Here, SeaRiver failed to meet these requirements. SeaRiver made timely objections to only two of the three arguments relating to SeaRiver's wealth that it now relies upon to seek reversal of the award – (1) to the argument beginning with the assertion that “it takes significant money to get the attention of a major corporation, the largest oil company in the world . . . ,” and (2), to the argument that “You’re making so much money, in fact, if we want to talk about the kind of money you’re making, you’re carrying a hundred – excuse me, one million to one-and-a-half million barrels of oil in these super tankers, each one of them at a hundred dollars a barrel, that’s a hundred million dollars”

With respect to the first example, SeaRiver's sole objection was that “the standard [that applies] is compensatory damages,” not that the argument improperly inflamed the jury. The trial court agreed, sustained the objection and advised plaintiff's counsel to “[p]lease move on.” SeaRiver thereafter asked for no admonishment for the jury.

With respect to the second example, SeaRiver's sole objection was that there was “no evidence about what the SeaRiver Company made.” Not only is this objection, like the first, unrelated to the company's argument on appeal, SeaRiver again made no request for an admonishment from the trial court.

Under these circumstances, we believe SeaRiver has waived the right to challenge any of counsel's wealth-related arguments for allegedly inflaming jury passion and prejudice. As the California Supreme Court has noted, even where “Counsel's zeal . . . in some instances led him into excesses,” “warnings, along with appropriate admonitions to the jury, might well have followed . . . if objection and a proper request for admonition had been lodged by opposing counsel.” (*Neal v. Farmers Ins. Ex.* (1978) 21 Cal.3d 910, 926.) Accordingly, we need not consider SeaRiver's challenges in this regard any further. (*Horn, supra*, 61 Cal.2d at pp. 606,610; *Ortega v. Pajaro Valley Unified School Dist.* (1998) 64 Cal.App.4th 1023, 1061; *Brokopp, supra*, 71 Cal.App.3d at p. 860.)

defendant's claim that damages were the product of “improper passion, prejudice and sympathy, inflamed by persistent and repeated misconduct of counsel” based upon defense counsel's failure to object to the alleged misconduct by counsel].)

B. Arguments Relating to SeaRiver's Litigation Tactics and Integrity.

In seeking reversal of the damages award, SeaRiver also relies upon certain statements from plaintiff's counsel relating to SeaRiver's litigation conduct and tactics. According to SeaRiver, counsel's statements criticizing its decisions not to settle this case and to hire Dr. Irons for \$600 per hour to provide expert testimony so inflamed the jury's passion and prejudice that excessive damages resulted.²³

Of course SeaRiver is correct all defendants have the right to defend their actions in court and to pay expert witnesses to testify on their behalf, rendering suspect any suggestion by plaintiff's counsel that SeaRiver behaved improperly by declining to settle this case or by hiring Dr. Irons. However, "[c]ounsel is granted wide latitude to discuss the merits of the case, both as to the law and facts, and is entitled to argue his or her case vigorously and to argue all reasonable inferences from the evidence." (*Nishihama v. City and County of San Francisco* (2001) 93 Cal.App.4th 298, 305.) Relevant here, a witness testifying as an expert may be challenged based upon his or her qualifications, compensation or possible bias in favor of the hiring party. (Evid. Code, §§ 721, 722.) Here, in challenging Dr. Irons's opinions, the amount of his compensation, and his extensive ties to the petroleum industry, plaintiff's counsel acted in accordance with these rules. (See *People v. Gray* (2005) 37 Cal.4th 168, 216.)

Moreover, even assuming any of counsel's comments could reasonably be construed as an improper attack on SeaRiver's litigation tactics or integrity, we believe the trial court, rather than this court, was in the best position to observe it and to correct it. "[B]ecause of the trial court's unique ability to determine whether a verdict resulted in whole or in part from the alleged misconduct, its decision to deny a motion for new trial

²³ SeaRiver contends the record is "rife" with such statements. For example, plaintiff's counsel suggested SeaRiver hired Dr. Irons, an expensive expert witness, "to come to Court and say, 'guess what, benzene doesn't cause kidney cancer, so we're going to fight you, drag you into court and make you prove it,' or [sic] would you pay your employee and say 'We're sorry, we're gonna take care of you.'" Counsel then added, "if [SeaRiver] had integrity in this case, they would not have brought in such a witness," and advised jurors "the only thing [corporations] understand is money. And that is all we can do for Mr. Shelby is money justice."

should not be disturbed unless plainly wrong.” (*Nishihama, supra*, 93 Cal.App.4th at p. 305. See also *Bertero v. National General Corp.* (1974) 13 Cal.3d 43, 64 [a trial court’s finding that a damages award was not the product of passion and prejudice “is to be accorded great weight because having been present at the trial the trial judge was necessarily more familiar with the evidence”].)

In this case, there is no evidence the trial court lacked firm and even-handed control over the proceedings, or that the overall atmosphere of trial was tainted with prejudice due to counsel’s conduct. Rather, the record merely reflects aggressive litigation by both sides over what were undoubtedly complex issues. The trial court thereafter clearly advised the jury of its legal duty to award only such damages as will reasonably compensate plaintiff for his pain and suffering, and of the fact that argument by counsel is not evidence, thereby curing any lingering prejudice. As such, we simply cannot say on this record that the trial court’s acceptance of the jury’s award was plainly wrong.

C. The Size of the Damage Award.

Finally, SeaRiver argues the “sheer size” of this award, particularly when compared to awards in cases with comparable facts, “strongly suggests” it contains an improper punitive element. However, while comparable cases may provide some evidence relating to the propriety of the size of an award, ultimately we must determine whether, based upon the unique facts of this case considered in a light most favorable to the judgment, the award is “so large that it shocks the conscience . . .” (*Westphal, supra*, 68 Cal.App.4th at p. 1074.) And while it is no doubt difficult for any jury to assign an objective, economic number as compensation for a person’s subjective pain, anxiety and discomfort, we have found nothing in this case to indicate, as a matter of law, that the jury based its award (which was less than plaintiff’s counsel requested) on anything other than the evidence before it. (*Beagle, supra*, 65 Cal.2d at p. 180 [“the

standard of reasonableness permits the jury a wide latitude of discretion”].) The award for future pain and suffering will therefore stand.²⁴

DISPOSITION

The judgment is affirmed. Costs awarded to respondent.

Jenkins, J.

We concur:

McGuiness, P. J.

Margulies, J.*

* Associate Justice of the Court of Appeal, First Appellate District, Division One, assigned by the Chief Justice pursuant to article VI, section 6 of the California Constitution.

²⁴ For the record, we disagree with plaintiff that awards for pain and suffering in comparable cases “have no precedential value whatsoever.” As the California Supreme Court explains: “[Other] cases do not, *in and of themselves*, mandate a reversal The vast variety of and disparity between awards in other cases demonstrate that injuries can seldom be measured on the same scale. The measure of damages suffered is a factual question and as such is a subject particularly within the province of the trier of fact. For a reviewing court to upset a jury’s factual determination on the basis of what other juries awarded to other plaintiffs for other injuries in other cases based upon different evidence would constitute a serious invasion into the realm of factfinding.” (*Bertero, supra*, 13 Cal.3d at p. 65, fn. 12.) Thus, other awards may be considered, but only with caution and within the context of the unique facts at hand.