

No. 1-21-1486

IN THE APPELLATE COURT OF ILLINOIS
FIRST DISTRICT

DAVID MOLITOR,) Appeal from the Circuit Court
Plaintiff-Appellant,) of Cook County, Law Division
)
vs.) Case No. 2018 L 001934
)
BNSF RAILWAY COMPANY,) Honorable Mary Colleen Wiley,
Defendant-Appellee.) Judge Presiding

BRIEF AND APPENDIX OF PLAINTIFF-APPELLANT
DAVID MOLITOR

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ORAL ARGUMENT REQUESTED

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Nature of the Action

Plaintiff David Molitor filed this negligence action for damages against his former employer, Defendant BNSF Railway Company, under the Federal Employers' Liability Act, alleging his exposure to carcinogens during his work for the railroad caused or contributed to his development of lymphoma. Mr. Molitor's industrial hygienist expert concluded he suffered a significant exposure to carcinogens during his railroad work, which was a foreseeable harm, and BNSF's failure to take adequate steps to prevent this fell below a reasonable standard of care. His medical causation expert concluded the toxic exposure was a likely cause of the lymphoma. BNSF moved to exclude both experts, arguing their opinions failed a *Frye* analysis. The trial court agreed, excluded both experts, and granted BNSF summary judgment. This appeal of right follows. No questions are raised on the pleadings.

Issue Presented for Review

Did the trial court erroneously act as gatekeeper in excluding the plaintiff's liability and medical causation experts under Illinois Rule of Evidence 702 and a *Frye* analysis at the summary judgment stage, where the experts explained their methodologies and testified they are generally accepted, the liability expert relied in part on the plaintiff's own sworn statements in determining he had suffered a substantial toxic exposure, and the medical causation expert additionally relied on his knowledge, training, and experience as a medical doctor?

Jurisdictional Statement

Plaintiff David Molitor appeals from a final judgment in a civil case, which the circuit court entered on July 26, 2021 (C. 3921; A. 1). On August 24, 2021, he filed a posttrial motion to reconsider the judgment (C. 3886). His posttrial motion was timely, as it was filed within 30 days of the Circuit Court's judgment. 735 ILCS 5/2-1203(a). The Circuit Court denied the posttrial motion on November 3, 2021 (C. 4399; A. 6). Mr. Molitor filed a notice of appeal on November 5, 2021 (C. 4401; A. 939). The notice of appeal was timely, as it was filed within 30 days of the order denying his posttrial motion. Supreme Court Rule 303(a)(1). Therefore, this Court has jurisdiction under Supreme Court Rule 301.

Statement of Facts

A. Overview

From 1973 to 2014, the BNSF Railway Company (“BNSF”) employed David Molitor first as a trainman and later a yardmaster (C. 35, 2014-15; A. 8, 645-55). In 2015, he was diagnosed with B-cell lymphoma, a form of cancer (C. 35, 2105-06; A. 8, 736-37). In 2018, he brought an action for damages against BNSF under the Federal Employers’ Liability Act (“FELA”), 45 U.S.C. §§ 51 *et seq.*, alleging his exposure to known carcinogenic toxins during his work for BNSF caused or contributed to his developing lymphoma (C. 35, 37-43; A. 8, 10-16).

Mr. Molitor identified Dr. Hernando Perez, Ph.D., as his expert to testify to industrial hygiene opinions as to his working conditions while working for BNSF, and identified Dr. Ernest Chiodo, M.D., as his medical causation expert (C. 1335-37; A. 66-68). BNSF moved to exclude both experts’ testimony, arguing their opinions were insufficient under the *Frye* standard (C. 1316, 1574; A. 47, 305). BNSF then moved for summary judgment, arguing that without experts on medical causation, breach of duty, and foreseeability of harm, Mr. Molitor could not prove his claims (C. 1300; A. 31).

The trial court granted BNSF’s motions to exclude the experts, holding their opinions did not meet the *Frye* standard, and then granted BNSF summary judgment (C. 3922-25; A. 2-5).

Mr. Molitor now appeals (C. 4401; A. 939).

B. Mr. Molitor's claims

David Molitor began working for BNSF's predecessor in 1973 as a brakeman and switchman, becoming a conductor in the 1990s and a yardmaster in 2003, and retiring in 2014 (C. 35, 1995, 2014-27; A. 8, 626, 645-58). In 2015, age 60, he was diagnosed with B-cell lymphoma (C. 1984, 2006, 2104-06; A. 615, 637, 735-37).

In February 2018, Mr. Molitor filed a negligence action for damages against BNSF under the FELA in the Circuit Court of Cook County, alleging his exposure to various toxic substances and carcinogens during his railroad employment caused his lymphoma (C. 35, 37-43; A. 8, 10-16). He alleged these included, among other things, "diesel fuel, diesel exhaust, diesel fumes, diesel smoke, diesel exhaust soot, benzene, Polycyclic Aromatic Hydrocarbons (PAHs), [and] Polychlorinated Biphenyls (PCBs)" (C. 37; A. 10).

Mr. Molitor alleged that throughout his BNSF work, [he] was required to work in close proximity to, or inside of, idling locomotive engines for long periods of time, sometimes indoors, while observing signals or working in the yard or on the rails, exposing him to at least the following toxic substances and carcinogens on a routine, daily basis: diesel fuel, diesel exhaust, diesel fumes, diesel smoke, diesel exhaust soot, benzene, and Polycyclic Aromatic Hydrocarbons (PAHs). ... [and]

[He] was required to travel via locomotive to different destinations throughout Illinois to perform his duties as a switchman, exposing him to, on a routine, daily basis, diesel fuel, diesel exhaust, diesel fumes, diesel smoke, diesel exhaust soot, benzene, and PCBs as he rode in the locomotive cabs.

(C. 37-38; A. 10-11). He alleged his “exposure to the above referenced toxic substances and carcinogens, which are known cancer causing agents, steadily over a course of many years caused, in whole or in part, his development of cancer” (C. 38; A. 11).

Mr. Molitor alleged this was negligence by BNSF because the railroad used known cancer-causing materials in its operation, which it knew or in the ordinary exercise of ordinary care should have known were harmful (C. 38-40; A. 11-13). He alleged twelve specific ways in which this failed the railroad’s duty of care to him (C. 40-41; A. 13-14).

In a deposition (C. 1980; A. 611), Mr. Molitor testified that as a switchman or brakeman, he worked outside at the Eola trainyard in Aurora, Illinois, switching cars onto tracks, making up trains, and switching out cars, for 50-60-car-long trains (C. 2017-18; A. 648-49). As a conductor, he rode in the lead locomotive taking trains to deliver loads and pick up empty cars or would be on the ground facilitating this, throwing switches, switching cars, and riding outside the locomotive (C. 2019-20, 2023-24; A. 650-51, 654-55). As a yardmaster from 2003-2007, he was in an office working trains in and out of the yard and lining up the switch crews (C. 2021; A. 652), though he also was outside in the yard at least once each shift for 30-45 minutes, out by locomotives every day (C. 2120; A. 751).

Mr. Molitor described a railyard as “a toxic environment” (C. 2033; A. 664). He recalled as a switchman inhaling diesel fumes and smoke from locomotives “[a]ll day while you were working,” and

complaining to superiors about this (C. 2034-36; A. 665-67). He said inhaling these fumes would make him dizzy or have a headache (C. 2123-24; A. 754-55). Sometimes he had to work inside a building with a running locomotive, with exhaust coming out the top (C. 2036-39; A. 667-70). He said even outside, wind would make the locomotive exhaust blow to the ground (C. 2041-42; A. 672-73). He said he would walk away from fume clouds when he could, but often the job he was doing did not allow it (C. 2043-44; A. 674-75). He recalled three times riding in a locomotive in which the exhaust fumes were in the cab to such a degree that he tried to refuse (C. 2072; A. 703). He said twice he was given a different locomotive, but the third time no others were available, so he had to continue riding in the locomotive (C. 2124-25, 2135-36; A. 755-56, 766-67).

Mr. Molitor described that usually once each year, sometimes twice, herbicides were used on the trainyard (C. 2061-62; A. 692-93). He was not pulled out of the yard when this occurred, and the contractors spraying the herbicide “would spray while you were working in the area” (C. 2063-64; A. 694-95). He said he once saw it was labeled “Roundup” (C. 2065; A. 696). He said he complained about the herbicide sprays to the trainmaster on duty (C. 2067; A. 698). The supervisors would tell him to get back to work (C. 2068; A. 699).

Mr. Molitor acknowledged he smoked a pack of cigarettes per week from age 15 or 16 until he quit in 2011, and then began smoking again during the proceedings below (C. 2084-87; A. 715-18).

C. Dr. Perez's evaluation and report

Mr. Molitor timely disclosed expert witnesses (C. 1335-36; A. 66-67). First, he listed Dr. Hernando Perez, Ph.D. as his industrial hygiene expert to testify to “the working conditions of Mr. David Molitor while employed by BNSF” (C. 1335-37; A. 66-68). Dr. Perez has a Ph.D. in industrial hygiene from Purdue University and has served as a professor of public health (C. 1359-60; A. 90-91).

Dr. Perez produced a report in this case concluding “to a reasonable degree of scientific and industrial hygiene certainty” (C. 1350; A. 81):

- Mr. Molitor “has a history of occupational exposure to diesel exhaust and herbicides” (C. 1339; A. 70);
- “Mr. Molitor experienced chronic occupational diesel exhaust exposure during the forty-one (41) year period between 1973 and 2014” (C. 1339; A. 70);
- Given Mr. Molitor’s duties and work history, as well as BNSF’s internal documentation about exposures inside locomotive cabs, from scientific literature studying diesel exhaust it can be estimated that his “average exposure to diesel exhaust while performing yard duties and switching local industries between 1973 and approximately 1988 was consistent with the upper quartile of the low range, with frequent excursions into the intermediate range and occasional excursions into the high range,” his “average exposure to diesel exhaust while performing

yard duties and switching local industries between 1989 and 2003 were consistent with the low range, with occasional excursions into the intermediate range,” his “average exposure to diesel exhaust as a yardmaster between 2004 and 2007 were consistent with ambient background concentrations, with occasional excursions into the low range,” and his “average exposure to diesel exhaust as a yard utility man and conductor between 2008 and his retirement in 2014 were consistent with the low range” (C. 1339-40; A. 70-71). Dr. Perez used exposure ranges from a study by a Dr. Anjoeka Pronk, a research scientist at the National Cancer Institute, which developed “a basis for assessing occupational exposure to diesel exhaust in population-based epidemiological studies and to guide future exposure assessment efforts for industrial hygiene and epidemiological studies,” to quantify this (C. 1340-41; A. 71-72).

- These exposure rates “were representative of environments associated with elevated risk of occupationally related cancer,” as exposure to and inhalation of diesel exhaust carries an excess cancer risk, and “the association between diesel exhaust exposure and cancer has been well established,” “[f]or these occupational carcinogens there exist no exposures below which the risk of cancer is zero,” and the railroad industry has been aware of these risks “[s]ince at least 1955” (C. 1341-42; A. 72-73).

- Mr. Molitor was exposed to herbicide, including Roundup, both on his skin and by inhaling it (C. 1342; A. 73).
- Estimating historical occupational exposures is possible using several scientific approaches “when objective and specific exposure measurement data are not available,” including “[e]xpert assessment by industrial hygienists,” and Dr. Perez did so “to evaluate the historical exposures to Mr. Molitor while employed by the railroads,” per existing scientific framework that he cited (C. 1345; A. 76).
- “[T]he use of sampling data from similar exposure groups” (“SEGs”), can produce valid estimates, but are invalid “[i]f the determinants of exposure between the sampled homogeneous exposure group and the individual whose historical exposure is in question are not consistent” (C. 1346; A. 77). An example of “improper use of SEGs in historical exposure assessment” was a study by Larry Liukonen of train crew exposure to elemental carbon, which failed to consider the threshold for overexposure (C. 1346-47; A. 77-78). Dr. Liukonen testified as BNSF’s Rule 206(a) corporate representative in this case (C. 1948; A. 579).
- BNSF did not provide Mr. Molitor adequate protective equipment to guard against diesel exhaust and herbicide exposure, and did not provide adequate restricted entry intervals to guard against herbicide exposure, despite internal documentation showing it

knew of these risks at the time and the importance of using this equipment to guard against them (C. 1348-49; A. 79-80).

- BNSF’s actions fell beneath a reasonable standard of care by failing to: “Provide adequate air monitoring or otherwise determine the level of exposure of Mr. Molitor to diesel exhaust or herbicides;” “Provide Mr. Molitor with appropriate training and respiratory protective equipment to prevent or lessen his exposure to diesel exhaust or herbicides;” “Implement any administrative or engineering controls to reduce or prevent diesel exhaust or herbicide exposure to Mr. Molitor;” “Provide adequate and appropriate warnings, training and information about the hazards of diesel exhaust or herbicides to Mr. Molitor;” “Comply with the OSHA General Duty Clause, OSHA Act Section 5(a)(1);” “Comply with the Locomotive Inspection Act, 49 USC 20701 and applicable regulations;” or “Provide Mr. Molitor with a reasonably safety place to work” (C. 1350; A. 81).

Dr. Perez stated to reach his conclusions, he reviewed Mr. Molitor’s work history and medical records, as well as scientific and government literature, and spoke with Mr. Molitor (C. 1337; A. 68). His report cited 119 sources, including Mr. Molitor’s deposition, interrogatory answers, scientific literature, personnel documents, BNSF’s rulebooks, operating codes, and hazard communication programs, and reports and data from railroad air sampling tests (C. 1351-58; A. 82-89).

In a deposition (C. 1681; A. 412), Dr. Perez testified how he assessed Mr. Molitor's exposures to herbicides and diesel exhaust. As to Roundup herbicides, Dr. Perez testified he reviewed limited air sampling data on Roundup exposure but found it distinguishable from Mr. Molitor's descriptions of his exposures (C. 1794-96; A. 525-27). Mr. Molitor's exposures were hazardous given his proximity and position to the source of exposure (C. 1794-96, 1803; A. 525-27, 534). The exposures also violated BNSF's policies (C. 1802-03; A. 533-34).

As to diesel exhaust exposure, Dr. Perez provided an estimated quantification of it in terms of elemental carbon, which he testified was the standard for measuring that exposure (C. 1761; A. 492). He testified this was formed from his expertise as an industrial hygienist after considering Mr. Molitor's descriptions of his exposures, identifying the sources of exposure from those descriptions, and placing Mr. Molitor in a framework outlined in the Pronk study (C. 1746, 1802-04; A. 477, 533-35). He testified he also considers exposure data he has accumulated from this case and others to consider Mr. Molitor's specific workplace exposures (C. 1802-07; A. 533-38). He testified this methodology for assessing a person's exposure to a substance, called a "Historical Exposure Assessment," is not new or novel, is supported by industrial hygiene literature, and is routinely performed by industrial hygienists (C. 1802, 1804-05; A. 533, 535-36).

Dr. Perez described the historical exposure assessment method:

A. The first step is to obtain -- so I reviewed industrial hygiene data from railroad environments provided by

railroads in the peer-reviewed literature, etc., a large number of individual pieces of data. That knowledge, that understanding, that review with that assessment I went through the process of collecting an exposure history -- a job history -- for Mr. Molitor through our conversation. Through that process, I identified the sources of exposure, the pathways for the contaminant to reach his breathing zone specifically, because we're talking specifically about inhalation exposures here, with diesel exhaust, with insecticide, with herbicides there may have been, you know, there may have been exposure but the primary exposure with diesel exhaust would have been inhalation, and given the nature of enclosures of his environments, the proximity to sources, his description of the nature of the source itself relative to others that he has experienced over the course of his career and -- that is all taken together with -- combining with my industrial hygiene experience and understanding of exposure in workplace settings to determine where he lies in the context of that framework provided by Pronk.

(C. 1803-04; A. 534-35). He then detailed the Pronk study (C. 1804-05; A. 535-36).

Dr. Perez testified this process he used is the same other industrial hygienists used, including Dr. Liukonen, though he said Dr. Liukonen applied the process differently (C. 1805-06; A. 536-37). Dr. Perez explained, "in industrial hygiene, unfortunately there are many instances during which we need to evaluate exposures for which there's no objective data. This happens all the time. And in order to do that, we need to go back and reconstruct the exposures to these individuals, and this is how we do it" (C. 1805; A. 536).

D. Dr. Chiodo's evaluation and report

Mr. Molitor also listed Dr. Ernest Chiodo, M.D. as his “medical causation” expert who “will testify that [Mr. Molitor]’s injury was caused, at least in part, by unreasonable exposures to diesel exhaust and herbicides” (C. 1335-36; A. 66-67).

Dr. Chiodo has many advanced degrees, including M.D., Juris Doctor, and Master of Science in both biomedical engineering and occupational and environmental health sciences from Wayne State University, Master of Public Health from Harvard University, Master of Science in threat response management and Master of Business Administration from the University of Chicago, and Master of Science in evidence-based health care from the University of Oxford, England (C. 1370-71; A. 101-02). He is board-certified in internal medicine and preventative medicine, both in occupational medicine and public health, and is a certified industrial hygienist (C. 1374; A. 105). He is a licensed physician in four states and an attorney in two, and was a professor of medicine, industrial hygiene, industrial toxicology, and law (C. 1373, 1375; A. 104, 106).

Dr. Chiodo produced a report concluding “to a reasonable degree of medical and scientific certainty that the exposures to diesel exhaust and herbicides experienced by Mr. David Molitor during the course of his railroad employment were a significant cause of his development of Diffuse B-Cell Lymphoma” (C. 1400, 1403; A. 131, 134). In the course of preparing his report, Dr. Chiodo reviewed the complaint, deposition

transcripts including Mr. Molitor's, discovery, Mr. Molitor's medical records, and Dr. Perez's report (C. 1401-02; A. 132-33). He also relied on his knowledge, training, and experience (C. 1462, 1529; A. 193, 260).

Dr. Chiodo's report cited two epidemiologic sources, a Canadian case control study of occupational exposures and non-Hodgkin's lymphoma published in August 2008 and a study of non-Hodgkin's lymphoma and occupational exposures to agricultural pesticide chemical groups and active ingredients published in 2014 (C. 1402-03; A. 133-34). He stated the first article provided support for his opinion that exposure to diesel exhaust can cause non-Hodgkin's lymphoma (C. 1402, 1460-62; A. 133, 191-93), and the second provided support for his opinion that exposure to herbicides can cause non-Hodgkin's lymphoma (C. 1403, 1492-93; A. 134, 223-24).

While neither of the studies used the word "cause" or "causation," and instead found the exposures were "associated" with lymphoma, Dr. Chiodo explained how he used them to corroborate his opinion that they cause lymphoma, which was based on his knowledge, training, and experience as a medical doctor board certified in internal medicine and preventative medicine, as a toxicologist, and as an industrial hygienist (C. 1516-21; A. 247-52). He explained these studies support his opinions that diesel exhaust and glyphosate herbicide exposure can cause Mr. Molitor's cancer (C. 1516-21; A. 247-52).

Dr. Chiodo explained how he interpreted the data each study contained and how their findings equated to his opinion to reasonable

degree of medical certainty (C. 1516-21; A. 247-52). He explained how based on his knowledge, training, and experience, the presence of a confounder in a study can affect the interpretation of whether there is causation for purposes of a lawsuit, that is, a more-likely-than-not probability (C. 1526-27; A. 257-58). That is, “unless there’s some identified confounder ... association means causation, unless some confounder is identified” (C. 1527; A. 258). He also discussed how the absence of the word “cause” or “causation” carries little meaning as it might translate to its use in the law and the burden of proof (C. 1468-71; A. 199-202). He reviewed the sources he cited for any confounders, determined there were none, and concluded association in this context reasonably equated to causation (C. 1481, 1489; A. 212, 220).

Dr. Chiodo testified there is a difference between the levels of certainty epidemiologic studies seek as compared to his endeavor to opine on causation to a reasonable degree of medical certainty (C. 1497-98; A. 228-29). He explained this difference and understanding are well-known, citing to the Federal Reference Manual on Scientific Evidence, which he described as a “joint publication by the Federal Judicial Center ... the think tank for the federal courts” (C. 1516; A. 247). He also testified it is generally accepted that exposure to diesel exhaust causes non-Hodgkin’s lymphoma (C. 1462; A. 193).

Dr. Chiodo also described that he could use the extrapolation method to reach his conclusions, extrapolating causation in this case from studies establishing that exposure to diesel exhaust and

glyphosate herbicide causes lung cancer, drawing upon his expertise to explain why he could extrapolate causation of Mr. Molitor's lymphoma:

Q: So Doctor, when you are looking at this case and you've arrived at your causation opinions, did you have to extrapolate those opinions from the existing literature, mindful of the limitations we've been discussing?

A: I didn't have to, but I could. Let me explain. I think the literature is very clear on this point, that non-Hodgkin's lymphoma is caused by diesel exhaust, and non-Hodgkin's lymphoma is caused by exposure to herbicides. I think it's very clear.

However, say you were in a circumstance where I didn't have that literature. Well, even IARC agrees that non-Hodgkin's lymphoma [*sic*] is a human carcinogen. They agree that it causes lung cancer.

So if somebody is exposed to a chemical that can cause lung cancer because you breathe it in -- and when somebody breathes in a chemical, it gets into their body. In fact, the most effective way to get a chemical into somebody's body, like in a cardiac arrest, which I've run codes many, many times, is that not to inject the medicine into their veins, it's to put it down an endotracheal tube, 'cause you get much greater absorption.

So if somebody is breathing a cancer-causing agent into the body and we -- and IARC -- even IARC agrees that diesel exhaust causes lung cancer, I think it is a fair extrapolation to say that diesel exhaust causes non-Hodgkin's lymphoma, another cancer, because there's a likely exposure.

You get it into your system, you get it into your blood, you get the -- you can get the same cancer-causing transformations in the hematopoietic system that causes cancer as diesel exhaust causing cancer in the lungs.

But I say that -- I don't think I have to extrapolate, but if I didn't have -- if there wasn't the literature that

corroborates my assertion that diesel exhaust causes non-Hodgkin's lymphoma and -- and herbicides caused non-Hodgkin's lymphoma, I think that I could fairly extrapolate general causation due to the known carcinogenicity of diesel exhaust, as propounded by the International Agency on Research of Cancer from the World Health Organization that clearly says that diesel exhaust causes lung cancer.

(C. 1525-26; A. 256-57).

Dr. Chiodo testified that in inquiries into causation of cancer, including non-Hodgkin's lymphoma, epidemiology and science can be limited because of ethical and latency concerns, as the only way to create direct cause-and-effect studies is to intentionally expose people to toxins, and even then there would be a limitation to establish cause-and-effect relationships because of the time it takes for a person to develop cancer from the last exposure (C. 1521-22; A. 252-53).

Regarding the amount of diesel exhaust and glyphosate herbicides to which Mr. Molitor would need to be exposed in order to develop his cancer, Dr. Chiodo said there is no threshold (C. 1497-98; A. 228-29). He testified that, when examining the possible causes of Mr. Molitor's cancer, he had to rule in his diesel exhaust and glyphosate herbicide exposures because, as carcinogens, they were more than what the average person would be exposed to, so they more likely than not played at least a role in the development of his cancer (C. 1532-34; A. 263-65). Dr. Chiodo testified he considered Mr. Molitor's age, weight, and smoking history, and that these could not be excluded from possible causes of the lymphoma, but that the exposures while working for the railroad remained likely causes (C. 1531-32; A. 262-63).

E. Proceedings below

BNSF timely answered Mr. Molitor's complaint and denied any liability (C. 285-98; A. 17-30).

In November 2020, BNSF moved to exclude Drs. Perez and Chiodo, arguing their opinions failed to meet the requirements of admissibility under Rule of Evidence 702 and the standard of *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923) (C. 1316, 1319, 1574, 1577; A. 47, 50, 305, 308). First, BNSF argued Dr. Perez's opinions lacked a reliable foundation and were not based on sufficient facts or data because he could not quantify Mr. Molitor's specific level of exposure, his opinions did not result from any scientifically valid or generally accepted methodology, and his opinions would not help the trier of fact (C. 1587-91; A. 318-22). Second, BNSF argued that Dr. Chiodo's causation opinion also was unreliable because association and causation are not the same and his extrapolation opinion was irrelevant (C. 1327-32; A. 58-63).

Along with the motion to exclude the experts, BNSF also moved for summary judgment on Mr. Molitor's claims (C. 1300, 1303; A. 31, 34). It argued Mr. Molitor could not make a submissible case without a medical causation expert, and as Dr. Chiodo had to be excluded, he could not prove his claims (C. 1308-10; A. 39-41). It also argued that because Dr. Perez's opinions were Mr. Molitor's only evidence of breach of duty or reasonable foreseeability of harm, and Dr. Perez had to be

excluded, he also could not prove his claims for this reason, either (C. 1310-13; A. 41-44).

Mr. Molitor opposed BNSF's motions (C. 1943, 1955, 2282; A. 573-74, 583). He argued the *Frye* test is not used to bar conclusions, but only to determine whether the technique used to reach that conclusion is generally accepted, and only applies when the scientific principle, technique, or test the expert used was new or novel, which these experts' were not (C. 1944, 2287; A. 575, 588). He also argued the court had to factor the FELA's lower standard of proof of causation into its analysis (C. 2286-87; A. 587-88).

As to Dr. Perez, Mr. Molitor argued Dr. Perez's opinions could rely on Mr. Molitor's testimony and he could place more weight on some studies than other, and Dr. Perez testified that his methodology was generally accepted, which was sufficient to satisfy *Frye* (C. 1945-51; A. 576-81).

As to Dr. Chiodo, Mr. Molitor argued he is qualified to render an expert opinion on causation and liability, he described a reasoned analysis in reaching his opinions after reviewing the relevant record, including using his knowledge, training, and experience, he testified his methods of reading and interpreting studies and extrapolating causation were generally accepted, and his opinions considered sufficient data (C. 2289-96; A. 590-97). Mr. Molitor also argued that any deficiencies in Dr. Chiodo's consideration of the underlying facts

went to the weight of his testimony, not its admissibility (C. 2294-96; A. 595-97).

As to BNSF's motion for summary judgment, Mr. Molitor argued that as its grounds for summary judgment depended on his experts being excluded, and the motions to exclude the experts should be denied, BNSF was not entitled to summary judgment (C. 1955; A. 573). BNSF filed replies in support of all its motions (C. 2301, 2304, 2314; A. 913, 916, 926).

After a hearing in June 2021 (C. 4243-81), in July 2021, the trial court entered an order granting BNSF's motions to exclude both Dr. Perez and Dr. Chiodo, and therefore granting BNSF's motion for summary judgment (C. 3921, 3925; A. 1, 5).

As to Dr. Perez, citing no authority the court held it could not determine whether his "opinions are based upon methodology or scientific principles that are generally accepted by the scientific community because they lack a reliable foundation, that is, they are not based on sufficient facts or data," but instead

are based upon his conversation with Molitor wherein Molitor recounted his experience with diesel fumes and herbicides during the time he worked for the railroad. Perez admits he never went to any of the sites Molitor worked nor did he even consider factors that may be relevant to the formation of his opinions. Not considering these factors among other relevant data and relying instead on Molitor for facts he determined salient does not form a sufficient basis for his opinions.

(C. 3923-24; A. 3-4).

As to Dr. Chiodo, the court stated, “Under *Frye*, the Court is to look at the actual methodology employed by the expert to reach his conclusion not just the general overall methodology. The Court must look behind the expert’s conclusions and analyze the adequacy of their foundation” (C. 3922; A. 2) (citing *Soto v. Gaytan*, 313 Ill. App. 3d 137, 146 (2d Dist. 2000)). It stated it reviewed the studies on which Dr. Chiodo relied, concluded they did not find causation, and Mr. Molitor did not show that how Dr. Chiodo interpreted those studies to explain they corroborated his opinion was generally accepted (C. 3922-23; A. 2-3). The court also rejected Dr. Chiodo’s explanation for how he extrapolates causation from those studies by likening different cancers with Mr. Molitor’s (C. 3923; A. 3). Therefore, it concluded Mr. Molitor failed to show Dr. Chiodo’s methodology was generally accepted (C. 3923; A. 3).

Mr. Molitor timely moved the court to reconsider its July order (C. 3886). When the court denied that motion (C. 4399; A. 6), he timely appealed to this Court (C. 4401; A. 939).

Argument

I. Standard of appellate review

This is an appeal from an order granting summary judgment. This Court reviews a summary judgment ruling *de novo*. *Collins v. St. Paul Mercury Ins. Co.*, 381 Ill. App. 3d 41, 45 (1st Dist. 2008).

Summary judgment is proper where “the pleadings, depositions, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law.” 735 ILCS 5/2-1005(c). It is a drastic measure and should only be granted when the moving party’s right to judgment is “clear and free from doubt.” *Outboard Marine Corp. v. Liberty Mut. Ins. Co.*, 154 Ill. 2d 90, 102 (1992).

“The purpose of summary judgment is not to try a question of fact, but to determine whether one exists” *Land v. Bd. of Educ. of City of Chicago*, 202 Ill.2d 414, 421 (2002). So, in considering a motion for summary judgment, a court is required to view the facts and draw reasonable inferences in a light most favorable to the nonmoving party. *Village of Bartonville v. Lopez*, 2017 IL 120643, ¶ 34. Credibility determinations and weighing evidence are functions for trial, not summary judgment. *Merca v. Rhodes*, 2011 IL App (1st) 102234, ¶ 46.

In an FELA case, a railroad can obtain summary judgment on causation only in “extremely rare instances where there is a zero probability either of employer negligence or that any such negligence contributed to the” employee’s injury. *Lynch v. N.E. Reg’l Commuter R.R. Corp.*, 700 F.3d 906, 911 (7th Cir. 2012) (citation omitted).

The trial court granted BNSF summary judgment because it held Mr. Molitor's two experts had to be excluded under a *Frye* analysis. See *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923). "Generally, the decision of whether to admit expert testimony lies within the sound discretion of the trial court and, absent an abuse of that discretion, its ruling will not be reversed." *Noakes v. Nat'l R.R. Passenger Corp.*, 363 Ill. App. 3d 851, 854 (1st Dist. 2006).

But because "[i]f a trial court's decision rests on an error of law, then it is clear that an abuse of discretion has occurred, as it is always an abuse of discretion to base a decision on an incorrect view of the law," *N. Spaulding Condo. Ass'n v. Cavanaugh*, 2017 IL App (1st) 160870, ¶ 46, the Supreme Court of Illinois has "adopt[ed] a dual standard of review with respect to the trial court's admission of expert scientific testimony." *In re Commitment of Simons*, 213 Ill.2d 523, 530-31 (2004). "The decision as to whether an expert scientific witness is *qualified* to testify in a subject area, and whether the proffered testimony is *relevant* in a particular case, remains in the sound discretion of the trial court. The trial court's *Frye* analysis, however, is now subject to *de novo* review." *Id.* (emphasis added).

So, where a trial court's exclusion of expert testimony under *Frye* is based on a misapplication of the *Frye* analysis, it constitutes reversible error. *Noakes*, 363 Ill. App. 3d at 855-59.

II. The trial court erred in excluding Dr. Hernando Perez as Mr. Molitor’s liability expert and Dr. Ernest Chiodo as his medical causation expert, and therefore granting BNSF summary judgment, as it misapplied the *Frye* standard in holding the experts’ testimony either lacked sufficient foundation for their conclusions or failed to show their methodology was generally accepted.

A. Summary

The FELA only requires a plaintiff to show that a railroad’s negligence played some part, no matter how small, in bringing about his injury. Under the *Frye* standard, where based on his knowledge, training, and experience a qualified expert will testify that using a generally accepted methodology he can conclude the railroad’s action was a likely cause of the plaintiff’s injury, that testimony is admissible to prove the plaintiff’s claim.

Here, based on their knowledge, training, and experience Drs. Hernando Perez and Ernest Chiodo concluded that a cause of Mr. Molitor’s lymphoma was his significant exposure to diesel exhaust and herbicides during his work for BNSF. Dr. Perez was able to determine this by applying Mr. Molitor’s work history to studies of exposure data and risk, which he testified were generally accepted scientific methodologies. Dr. Chiodo then concluded from his own expertise and from studies linking these exposures to lymphoma, that this exposure was a likely cause of Mr. Molitor’s lymphoma, which he also testified were generally accepted scientific methodologies.

Nonetheless, the trial court excluded Drs. Perez and Chiodo. It did not impugn either expert’s qualifications or the relevance of their

testimony. Instead, it held they were inadmissible under *Frye* because Dr. Perez's reliance on Mr. Molitor's testimony and work records was insufficient foundation, and both experts' testimony that their methodologies were generally accepted was insufficient to show so. Reasoning that Mr. Molitor therefore could not prove causation without an expert, the trial court then granted BNSF summary judgment.

This was error. The *Frye* analysis does not implicate the foundations of an expert's testimony, and it is well-established that an expert can rely on a plaintiff's own testimony and records in applying a scientific methodology to it to reach a conclusion. It is equally well-established that an expert's detailed testimony, supported by scientific literature, that his methodology is generally accepted is sufficient to be admissible and not invoke *Frye*, especially at the summary judgment stage where it must be taken as true. That the experts here did not or could not know the precise amount of Mr. Molitor's exposure or could not definitively rule out some other possible causes went to the weight of their testimony, not its admissibility.

This Court should reverse the trial court's orders excluding Drs. Perez's and Chiodo's testimony and granting BNSF summary judgment, and should remand this case for further proceedings.

B. The *Frye* analysis only applies to new or novel scientific methodologies, and only requires an expert to show the method used to reach his or her conclusion is generally accepted by experts in the field and he or she reasonably relied on that methodology.

Illinois Rule of Evidence 702 provides:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.

Where an expert witness testifies to an opinion based on a new or novel scientific methodology or principle, the proponent of the opinion has the burden of showing the methodology or scientific principle on which the opinion is based is sufficiently established to have gained general acceptance in the particular field in which it belongs.

As the Comment to this rule states, “Rule 702 confirms that Illinois is a *Frye* state. The second sentence of the rule enunciates the core principles of the *Frye* test for admissibility of scientific evidence”

So, “Illinois law is unequivocal: the exclusive test for the admission of expert testimony is governed by the standard first expressed in *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923).” *Donaldson v. Cent. Ill. Pub. Serv. Co.*, 199 Ill.2d 63, 76-77 (2002), *abrogated on other grounds by Simons*, 213 Ill.2d at 530-31. “The *Frye* standard, commonly called the ‘general acceptance’ test, dictates that scientific evidence is only admissible at trial if the methodology or scientific principle upon which the opinion is based is ‘sufficiently established to have gained general acceptance in the particular field in which it belongs.’” *Id.* at 77 (quoting *Frye*, 293 F. at 1014).

But “‘general acceptance’ does not mean universal acceptance, and it does not require that the methodology in question be accepted by unanimity, consensus, or even a majority of experts.” *Simons*, 213 Ill.2d at 530 (citing *Donaldson*, 199 Ill.2d at 78). “Instead, it is sufficient that the underlying method used to generate an expert’s opinion is reasonably relied upon by experts in the relevant field.” *Id.* (citing *Donaldson*, 199 Ill.2d at 77). “If the underlying method used to generate an expert’s opinion are reasonably relied upon by the experts in the field, the fact finder may consider the opinion – despite the novelty of the conclusion rendered by the expert.” *Donaldson*, 199 Ill.2d at 77.

For example, “[t]he medical community may entertain diverse opinions regarding causal relationships, but this diversity of opinion does not preclude the admission of testimony that a causal relationship exists if the expert used generally accepted methodology to develop the conclusion.” *Id.* “[A] cause-effect relationship need not be clearly established by animal or epidemiological studies before a doctor can testify that, in his opinion, such a relationship exists,” just “[a]s long as the basic methodology is sound” *Id.* (quoting *Ferebee v. Chevron Chem. Co.*, 736 F.2d 1529, 1535 (D.C. Cir. 1984)).

Moreover, “[s]ignificantly, the *Frye* test applies only to ‘new’ or ‘novel’ scientific methodologies.” *Simons*, 213 Ill.2d at 53 (citing *Donaldson*, 199 Ill.2d at 78-79). “Generally speaking, a scientific methodology is considered ‘new’ or ‘novel’ if it is “original or striking” or

‘does ‘not resembl[e] something formerly known or used.’” *Id.* (quoting *Donaldson*, 199 Ill.2d at 79 (quoting WEBSTER’S 3D NEW INT’L DICT. 1546 (1993))). So, the *Frye* rule is only “meant to exclude methods new to science that undeservedly create a perception of certainty when the basis for the evidence or opinion is actually invalid.” *Donaldson*, 199 Ill.2d at 78.

Therefore, “*Frye* does not make the trial judge a ‘gatekeeper’ of all expert opinion testimony. The trial judge’s role is more limited. The trial judge applies the *Frye* test only if the scientific principle, technique or test offered by the expert to support his or her conclusion is ‘new’ or ‘novel,’” and so “[o]nly novelty requires that the trial court conduct a *Frye* evidentiary hearing to consider general acceptance.” *Donaldson*, 199 Ill.2d at 78-79 (citing *People v. Basler*, 193 Ill.2d 545, 550-51 (2000)). And “[o]nce a principle, technique, or test has gained general acceptance in the particular scientific community, its general acceptance is presumed in subsequent litigation; the principle, technique, or test is established as a matter of law.” *Id.* at 79.

In *Donaldson*, the Supreme Court applied these principles in the context of the plaintiffs’ experts in a toxic exposure case, in which the plaintiffs alleged their exposure to coal tar caused them to develop neuroblastoma, a rare form of cancer. 199 Ill. 2d at 66. The defendant argued that because the plaintiffs’ experts could not point to any scientific study definitively concluding that coal tar caused neuroblastoma and also could not show the exact amount of the

plaintiffs' coal tar exposure, their opinions failed *Frye* and had to be excluded. *Id.* at 82, 91.

The Supreme Court held *Frye* was not implicated, because the plaintiffs' experts explained how using a generally accepted methodology, extrapolation, which "involves establishing a cause and effect relationship based upon similar, yet not identical, scientific studies and theories," they could use studies linking coal tar's carcinogens to other forms of cancer and their knowledge of neuroblastoma to determine coal tar was a likely cause of the plaintiffs' neuroblastomas, too. *Id.* at 82-88. The Supreme Court held extrapolation is generally accepted in the scientific community, especially to determine causation "when the medical inquiry is new or the opportunities to examine a specific cause and effect relationship are limited." *Id.* at 83-85.

The Court explained:

In some cases, medical science is simply unable to establish the cause and origin of disease. In others, medical science does not seek to establish the existence of a cause and effect relationship – for example, in this instance, the small number of neuroblastoma cases limits study of the disease. As a result, extrapolation offers those with rare diseases the opportunity to seek a remedy for the wrong they have suffered. Thus, in these limited instances, an expert may rely upon scientific literature discussing similar, yet not identical, cause and effect relationships. The fact that an expert must extrapolate, and is unable to produce specific studies that show the exact cause and effect relationship to support his conclusion, affects the weight of the testimony rather than its admissibility.

Id. at 85.

In support, the Supreme Court in *Donaldson* cited *Duran v. Cullinan*, 286 Ill. App. 3d 1005, 1011-13 (2d Dist. 1997), which held it is proper under *Frye* for an expert using studies of a drug causing certain birth defects to extrapolate that it also caused the plaintiff's birth defects, and reversed a summary judgment against the plaintiff. 199 Ill.2d at 83-85. The Supreme Court in *Donaldson* also cited *Ferebee*, 736 F.2d at 1535-36, in which the D.C. Circuit considered the admission of expert testimony to prove exposure to a toxic chemical caused a decedent's illness and death and held, "In a courtroom, the test for allowing a plaintiff to recover in a tort suit of this type is not scientific certainty but legal sufficiency; if reasonable jurors could conclude from the expert testimony that [the chemical] paraquat more likely than not caused Ferebee's injury, the fact that another jury might reach the opposite conclusion or that science would require more evidence before conclusively considering the causation question resolved is irrelevant." 199 Ill.2d at 86 (quoting *Ferebee*).

Moreover, the Supreme Court in *Donaldson* held a *Frye* analysis inappropriate because "the method of extrapolation does not concern a technique new to science that may instill a sense of 'false confidence' or carry a misleading sense of scientific 'infallibility.'" *Id.* at 86 (citations omitted). "By contrast, extrapolation by nature admits its fallibility – the lack of specific support to establish the existence of a known cause

and effect relationship. The jury is left to judge the veracity of the expert's conclusion." *Id.* at 87.

Therefore, the experts' conclusions in *Donaldson* did not implicate *Frye*, because they testified they used a generally accepted methodology upon which they reasonably relied:

The relationship between coal tar and neuroblastoma has simply not been the subject of extensive study and research. One expert explained that because few people are diagnosed with neuroblastoma, the disease is simply not the subject of extensive funding and study. Further, plaintiffs' experts testified that few studies exist regarding the specific cause and effect relationship at issue in this case because ethical considerations prevent exposing the human population to coal tar for research purposes. Moreover, plaintiffs' experts explained that scientific research is limited because the cases of environmental exposure are often detected after the onset of illness, which prevents proper controlled settings to study the effects of exposure. Therefore, all of plaintiffs' experts testified that they utilized the method of extrapolation, and that the technique is generally accepted in their fields. Like plaintiffs' experts in *Duran*, however, plaintiffs' experts in the instant case relied upon the only available source of information to form the basis of their conclusions – similar, yet not identical, scientific studies and theories. From these studies, plaintiffs' experts concluded that coal tar caused these plaintiffs' neuroblastomas. [The defendant] offers no evidence to suggest that this method, extrapolation, is not utilized or generally accepted among the scientific community. Instead, [the defendant] insists the *conclusion* is not generally accepted in the scientific community; therefore, the methodology is not generally accepted. Again, in the interest of clarity, an expert's conclusion is subject to challenge by traditional efforts such as cross-examination. The general acceptance test should

not replace the role of the advocate, who may expose shaky but admissible evidence by vigorous cross-examination or the presentation of contrary evidence.

Id. at 87-88 (emphasis in the original).

Finally, the Supreme Court in *Donaldson* held the plaintiffs did not have to quantify the amount of their exposure to coal tar, but only that they “came into contact with chemicals” at issue, as “Illinois law does not require that plaintiffs quantify the level of exposure.” *Id.* at 91. “Environmental exposure cases, like the instant case, do not afford litigants the opportunity to specify with such certainty the exact level and dose of exposure. In most instances, the details of exposure, including information of exactly when or where exposure occurred, is not available. Here, plaintiffs were not required to show the exact amount of exposure.” *Id.* at 92.

As Mr. Molitor shows below, the trial court misapplied all of these principles in excluding both Dr. Perez and Dr. Chiodo in this similar exposure case, especially at the summary judgment stage. These experts did not utilize new or novel methodologies in concluding Mr. Molitor had experienced a substantial exposure to carcinogens during his railroad work, that this violated BNSF’s standard of care, or that this was a likely cause of his lymphoma. Instead, their methodologies in reaching these conclusions were generally accepted, they reasonably relied on those methodologies, and a *Frye* analysis was not implicated. The trial court misapplied *Frye* in holding otherwise.

C. A *Frye* analysis does not include analyzing the factual basis for the expert’s opinion, which only goes to the weight of the testimony, not its admissibility.

Because a trial court is not a gatekeeper under *Frye*, its role does not include analyzing the factual basis for the expert’s opinion. *Noakes*, 363 Ill. App. 3d at 857-58. Instead, that only goes to the weight of the expert’s testimony, not its admissibility under *Frye*, which solely concerns whether the expert’s methodology is generally accepted. *Id.* The trial court here erred in concluding otherwise.

Below, the trial court held that before getting to methodology, it had to analyze the sufficiency of the experts’ opinions’ foundations, citing *Soto v. Gaytan*, 313 Ill. App. 3d 137 (2d Dist. 2000) (C. 3922; A. 2). It held that per *Soto*, it “must look behind the expert’s conclusions and analyze the adequacy of their foundation” (C. 3922; A. 2). It held Dr. Perez’s opinions must be excluded for this reason, “because they lack a reliable foundation, that is, they are not based on sufficient facts or data” (C. 3923; A. 3), and Dr. Chiodo’s must be excluded for this reason, too, because the studies on which he based his conclusions did not directly state diesel exhaust exposures caused lymphoma, but only found evidence of a positive “association with” it (C. 3922-23; A. 2-3).

This was error. The decision in *Soto* came two years before *Donaldson*, and concerned the admissibility of a physician’s opinions on the question of permanency of an injury. *Id.* at 147. The Supreme Court later clarified in *Decker v. Libell*, 193 Ill.2d 250, 254 (2000), resolving a split among the Appellate Court’s districts including *Soto*,

that this reliability analysis is limited only to “what circumstances are relevant in determining the admissibility of opinion testimony about the prognosis for a patient’s injuries or condition.”

Indeed, in *Soto*, the Second District even had held, relying on *Harris v. Cropmate Co.*, 302 Ill. App. 3d 364, 365 (4th Dist. 1999), that “the trial court has traditionally functioned in a role as the gatekeeper of proposed opinion testimony that is submitted to a jury,” which “may be seen in the fact that Illinois has adopted the *Frye* test for determining the validity of scientific testimony” and “[p]ursuant to *Frye*, the trial court closely examines proposed opinion testimony from a scientific expert to determine whether it bears sufficient indicia of reliability to submit to the jury.” 193 Ill.2d at 146. In *Donaldson*, the Supreme Court specifically rejected all of this, holding “*Frye* does not make the trial judge a ‘gatekeeper’ of all opinion testimony,” and expressly abrogated the part of *Harris* on which the Second District in *Soto* had relied, holding “[t]he trial court is not required to conduct a two-part inquiry into both the reliability of the methodology and its general acceptance.” 199 Ill.2d at 81.

To the contrary, as the Supreme Court clarified in *Donaldson*, the sufficiency of the factual underpinnings of an expert’s testimony only goes to its weight, not its sufficiency. *Id.* at 81. “[T]he *Frye*-plus-reliability test impermissibly examines the data from which the opinion flows, while the technique remains generally accepted. Questions concerning underlying data, and an expert’s application of generally

accepted techniques, go to the weight of the evidence, rather than its admissibility.” *Id.* at 81.

In *Noakes*, this Court followed this holding in *Donaldson* to reverse the exclusion of a plaintiff’s expert and a resulting directed verdict for the defendant. 363 Ill. App. at 858-59. One of the trial court’s reasons in *Noakes* for excluding the experts was its holding that under *Frye*, the experts’ testimony “lacked a sufficient factual basis,” specifically that “they did not know the particulars of plaintiff’s job,” and so “were unable to articulate any factual basis for their bare conclusions that plaintiff’s carpal tunnel syndrome was work related.” *Id.* at 858.

This Court held this was an improper finding, because “the basis for a witness’s opinion generally goes only to the weight of the evidence, not its sufficiency.” *Id.* (citing *Snelson v. Kamm*, 204 Ill.2d 1, 26-27 (2003)). As the Court explained,

In fact, the *Snelson* court emphasized that “the weight to be assigned to an expert opinion is for the jury to determine in light of the expert’s credentials and the factual basis of his opinion.” *Snelson*, 204 Ill.2d at 27. Also, in *Turner v. Williams*, the court decided that the information used or not used by the expert was not a sufficient basis to bar, as lacking foundation, the expert’s testimony. *Turner v. Williams*, 326 Ill. App. 3d 541, 555 (2d Dist. 2001). As the court explained, the issue could have been adequately brought to light before the jury on cross-examination. *Id.*

Noakes, 363 Ill. App. 3d at 858-59 (internal citations reformatted).

In *Noakes*, the experts “had reasonable understandings of the nature of the work that plaintiff performed, as well as the mechanics of

carpal tunnel syndrome and other motion related injuries from which plaintiff suffered,” which was all that was required. *Id.* at 859. “The fact that there were various aspects of plaintiff’s work that the physicians were unaware of, as noted by defendant, would affect the weight of the evidence and the credibility of the physicians, rather than the admissibility of that testimony. The issue can be adequately brought to light before the jury on cross-examination.” *Id.*

The trial court here erred in adopting a gatekeeper role and analyzing the sufficiency of the experts’ opinions’ foundations under the now-abrogated “*Frye*-plus-reliability” test. This misapplied *Frye*, which excludes such a role and does not factor in reliability. Instead, the foundations of Mr. Molitor’s experts’ opinions and any deficiencies identified are questions of weight of the evidence for the jury, not the experts’ admissibility.

D. Especially at the summary judgment stage, an expert’s sworn statement that his or her methodology is generally accepted is sufficient, and obviates further *Frye* analysis.

The trial court also held it could not determine whether Dr. Perez or Dr. Chiodo’s opinions were generally accepted because it had nothing more than their own statements to determine this (C. 3922-24; A. 2-4). It held Mr. Molitor had not provided any other scientific evidence that Dr. Chiodo method of extrapolating causation of lymphoma from his general experiential knowledge that diesel exhaust and herbicide exposure cause cancer and studies finding an association between those carcinogens and lymphomas was generally accepted (C. 3922-23; A. 2-

3). It held Dr. Perez's only evidence that his methodology was generally accepted was his own statements, which it could not accept because his opinions "lack a reliable foundation, that is, they are not based on sufficient facts or data" (C. 3923; A. 3).

This was error. The law of Illinois is that at the summary judgment stage, Dr. Chiodo's and Dr. Perez's statements that their methodologies were generally accepted must be taken as true.

In *Duran*, of which the Supreme Court approved in *Donaldson*, 199 Ill.2d at 83-85, the Second District reversed a summary judgment predicated on the exclusion of the plaintiff's causation expert for this reason. 286 Ill. App. 3d at 1011-13. There, the plaintiff alleged her daughter suffered birth defects caused by a physician's prescription of a contraceptive drug while she was pregnant with the daughter. *Id.* at 1006. "The trial court granted the defendants' motion for summary judgment, finding that the plaintiffs' experts' conclusions as to causation were inadmissible under" *Frye*. *Id.* at 1006-07.

The plaintiffs' experts had opined that while no studies of the drug at issue directly showed that it caused the kind of birth defects the plaintiff's daughter suffered, they could extrapolate this causation from studies showing that the same drug caused other birth defects, given their knowledge of how these birth defects form. *Id.* at 1008-09. The defendants argued the experts' opinions "lacked sufficient foundation for admissibility," because "the 'extrapolation' method used by the plaintiffs' experts in reaching their opinions on causation was

not generally accepted in the scientific community as is required by *Frye*, 293 F. at 1014.” *Id.* at 1009. In response to the defendants’ summary judgment motion, the plaintiffs provided an affidavit from one of their experts stating the extrapolation methodology the plaintiffs’ experts used was generally accepted. *Id.*

Like the trial court here, “the trial court granted the defendants’ motion for summary judgment,” stating “that no study specifically showed [the drug at issue] to cause birth defects of the type found in [the daughter,” and the plaintiffs’ experts’ opinions rested on extrapolation from studies, so “general acceptance of the “extrapolation” technique must be tested under *Frye*.” *Id.* It then “concluded that, because the plaintiffs’ methodology in reaching their conclusion was not generally accepted in the scientific community,” as it was not peer reviewed, “a genuine issue of material fact did not exist and therefore summary judgment was appropriate.” *Id.*

The Appellate Court reversed, reviewing decisions from other courts relying on extrapolation as generally accepted, *id.* at 1010-12, but also noting that as the case was at the summary judgment stage, the plaintiffs’ expert’s affidavit had to be taken as true:

Taking as true the plaintiffs’ expert’s affidavit asserting that the extrapolation method is commonly used by the scientific community as well as various federal agencies, taken along with the similarity between some of the defects described in the scientific literature and those exhibited by [the plaintiff’s daughter], we find that the trial court abused its discretion in finding that the plaintiffs’ extrapolation from the studies was not a technique

sufficiently established to have gained general acceptance in this particular scientific field. Thus, we conclude that the plaintiffs' experts may give their opinion as to causation and the weight to be afforded those opinions are matters for the jury to resolve. Under the circumstances of the case at bar, the fact that plaintiffs' experts had to "extrapolate" from various studies in arriving at their opinion rather than rely on a specific epidemiological study affects the weight of the testimony and not its admissibility. Accordingly, we hold that the trial court erred in granting the defendants' motion for summary judgment.

Id. at 1013. And in *Donaldson*, the Supreme Court approved of the Court in *Duran* holding that the plaintiffs' expert's sworn affidavit had to be taken as true, given the summary judgment posture. 199 Ill.2d at 83-84.

Here, both Dr. Perez and Dr. Chiodo testified that the scientific community generally accepted their methodologies.

Dr. Perez stated that to come to his conclusions, he relied on data in peer-reviewed literature, data provided by the railroads, and a general understanding of the way airborne contaminants distribute, as well as their nature and factors affecting them (C. 1476; A. 477). He testified his process of a historical exposure assessment process is the same other industrial hygienists use, including BNSF's corporate representative Dr. Liukonen (C. 1805-06; A. 536-37).

Dr. Chiodo testified that using studies finding association to reach opinions on causation is well known and accepted, including by the Federal Judicial Center's manual (C. 1516; A. 247), and it is generally accepted that exposure to diesel exhaust causes non-

Hodgkin's lymphoma (C. 1462; A. 193). He also testified that his conclusions could be reached through extrapolation from the studies he found and his expert knowledge of carcinogens and lung cancer, which is accepted by the International Agency on Research of Cancer from the World Health Organization (C. 1525-26; A. 256-57).

As the Courts in *Duran* and *Donaldson* held, at the summary judgment stage the trial court here was bound to take these statements as true. It erred in failing to do so. The affidavit in *Duran* was just as authoritative as sworn testimony at a deposition. *Komater v. Kenton Court Assocs.*, 151 Ill. App. 3d 632, 637 (2d Dist. 1986).

E. The FELA only requires an expert on causation to be able to opine that the railroad's action likely played some role, however small, in causing the plaintiff's injury.

It also bears consideration that this is an action under the FELA. While expert testimony is just as necessary to prove a causal connection between an action and an injury in an FELA case as it is in ordinary injury case, *Moody v. Maine Cent. R.R. Co.*, 823 F.2d 693, 695-96 (1st Cir. 1987), the remedial nature of the FELA has a significant effect on the admissibility of expert testimony under *Frye*, because the FELA's standard of causation is relaxed and low. *Hines v. Consolidated Rail Corp.*, 926 F.2d 262, 268-69 (3d Cir. 1991).

Enacted in 1908, the FELA provides railroad employees with a special federal cause of action for injuries "resulting in whole or in part from" a railroad's negligence "or by reason of any defect or insufficiency, due to its negligence" 45 U.S.C. § 51. Congress's

purpose in enacting it was humanitarian. *Metro-N. Commuter R.R. Co. v. Buckley*, 521 U.S. 424, 438 (1997). It “uses broad language that, in turn, has been construed even more broadly by th[e U.S. Supreme] Court, consistent with its ... legislative intent.” *Monessen S.W. Ry. Co. v. Morgan*, 486 U.S. 330, 343 (1988).

The FELA’s broad language, “an avowed departure from the rules of the common law, was a response to the special needs of railroad workers who are daily exposed to the risks inherent in railroad work and are helpless to provide adequately for their own safety.” *Sinkler v. Mo. Pac. R.R. Co.*, 356 U.S. 326, 329 (1958). It was “a radical change from the common law in an attempt to assure workers a more sure recovery by abolishing many traditional defenses.” *Poleto v. Conrail*, 826 Fd.2d 1270, 1278 (3d Cir. 1987). (This was necessary because there is no workers’ compensation for interstate-commerce railroad workers.)

Sixty years ago, the U.S. Supreme Court held that given the FELA’s broad language and humanitarian purpose, a jury may find a railroad liable so long as the evidence justifies the conclusion that the railroad’s negligence “played any part, even the slightest, in producing the injury.” *Rogers v. Mo. Pac. R.R. Co.*, 352 U.S. 500, 506 (1957). This is because “the FELA is a broad remedial statute and” the Supreme Court “adopted a standard of liberal construction in order to accomplish [Congress’s] objectives” in it. *Atchison, Topeka & Santa Fe Ry. Co. v. Buell*, 480 U.S. 557, 562 (1987). As well, “the FELA does not authorize

apportionment of damages between railroad and nonrailroad causes.” *Norfolk & W. Ry. Co. v. Ayers*, 538 U.S. 135, 159-60 (2003).

Then, in 2011, after some courts had cut down on this, the U.S. Supreme Court re-clarified and reapplied this relaxed standard of causation. *See CSX Transp., Inc. v. McBride*, 564 U.S. 685 (2011). In *McBride*, the railroad argued the FELA’s correct causation standard should be ordinary proximate cause as in common-law negligence cases. *Id.* at 688. The Supreme Court rejected this attempt to increase the plaintiff’s burden of proof on causation. *Id.*

The FELA “does not incorporate ‘proximate cause’ standards developed in nonstatutory common-law actions.” *Id.* Instead, “[t]he charge proper in FELA cases, we hold, simply tracks the language Congress employed, informing juries that a defendant railroad caused or contributed to a plaintiff’s employee’s injury if the railroad’s negligence played *any part* in bringing about the injury.” *Id.* (emphasis added). “Juries in such cases are properly instructed that a defendant railroad ‘caused or contributed to’ a railroad worker’s injury ‘if [the railroad’s] negligence played a part – no matter how small – in bringing about the injury.’” *Id.* at 705.

This means “[t]he standard of causation in an FELA action is a ‘low and liberal’ one that works in favor of submission of issues to the jury ... rather than toward foreclosure through a directed verdict or judgment N.O.V.” *Smith v. Nat. R.R. Passenger Corp.*, 856 F.2d 467, 469 (2d Cir. 1988). “[I]t is clear that the congressional intent in

enacting the FELA was to secure jury determinations in a larger percentage of cases than would be true of ordinary common law actions. In other words, ‘trial by jury is part of the remedy.’” *Boeing Co. v. Shipman*, 411 F.2d 365, 371 (5th Cir. 1969) (citations omitted); *see also Bailey v. Cent. Vt. R.R.*, 319 U.S. 350, 354 (1943) (“To deprive [railroad] workers of the benefit of a jury trial in close or doubtful cases is to take away a goodly portion of the relief which Congress has afforded them” in the FELA).

Therefore, the relaxed FELA standard of causation necessarily impacts the quantum of what an expert must testify for his opinion to be admissible under *Frye*. *Hines*, 926 F.2d at 268-69. Under the FELA,

a medical expert can testify that there was more than one potential cause of a plaintiff’s condition. In *Sentilles v. Inter-Caribbean Shipping Corp.*, 361 U.S. 107 (1959), for example, a seaman brought suit under the Jones Act (which specifically incorporates FELA) seeking damages for a tubercular illness that he claimed was caused by an accident that activated or aggravated a latent tubercular condition. None of the three medical witnesses testified that the accident in fact caused the illness. ...

Despite this lack of medical unanimity over the particular cause of the illness, the Court concluded that the differences in testimony did not impair the jury’s ability to draw causal inferences. Furthermore, the Court recognized the general reluctance among experts to state that a trauma was the cause of a disease. As the Court explained, “[t]he matter does not turn on the use of a particular form of words by the physicians in giving their testimony,” since it is the task of the jury and not the medical witnesses to make a legal determination regarding causation.

Hines, 926 F.2d at 268-69 (internal citations omitted).

Therefore, in *Hines*, applying *Frye*, the Third Circuit agreed with the plaintiff “that the standard under FEELA can significantly influence a determination of the admissibility of [an expert’s] testimony.” *Id.* It then held that under the FEELA, the plaintiff’s expert’s testimony was admissible, because he concluded the PCB exposure was *a* likely cause of the plaintiff’s cancer, he was qualified to conclude this, and his methodology – principally relying on other studies – was generally accepted. *Id.* at 275-76.

F. Drs. Perez’s and Chiodo’s opinions do not implicate *Frye*, as their methodologies are generally accepted, their conclusions have sufficient foundation, and a jury could rely on their testimony in determining BNSF’s liability and the causation of Mr. Molitor’s lymphoma.

Here, like the experts in *Donaldson*, *Duran*, *Ferebee*, *Hines*, and other decisions cited above, Dr. Perez and Dr. Chiodo’s opinions were proper and admissible. They did not implicate *Frye*, as their opinions were not new or novel, and instead they used generally accepted methodologies on which they reasonably relied. And to the extent the factual foundation for their opinions even can be at issue, it was more than sufficient.

First, Dr. Perez explained his methodology of a historical exposure assessment in detail. He used his expertise as an industrial hygienist after considering Mr. Molitor’s descriptions of his workplace exposures, identifying the sources of exposure from those descriptions, and placing him in a framework outlined in the Pronk study, to gauge

an estimated quantification of Mr. Molitor's diesel exhaust exposure in terms of elemental carbon, which he testified was the standard for measuring that exposure (C. 1746, 1761, 1802-04; A. 477, 492, 533-35). He testified this methodology for assessing a person's exposure to a substance, a "Historical Exposure Assessment," is not new or novel, is supported by industrial hygiene literature, and is routinely performed by industrial hygienists (C. 1802, 1804-05; A. 533, 535-36). He testified other industrial hygienists, including BNSF's representative Dr. Liukonen, used this same process (C. 1805-06; A. 536-37).

Plainly, Dr. Perez's methodology is not new or novel, and instead is generally accepted in the scientific community for estimating historic toxic exposures that cannot be directly measured. As the Supreme Court explained in *Donaldson*, this is common in toxic exposure cases, because "cases of environmental exposure are often detected after the onset of illness, which prevents proper controlled settings to study the effects of exposure." 199 Ill.2d at 87. Similarly, "[e]nvironmental exposure cases, like the instant case, do not afford litigants the opportunity to specify with such certainty the exact level and dose of exposure. In most instances, the details of exposure, including information of exactly when or where exposure occurred, is not available." *Id.* at 92. Instead, historical assessments like Dr. Perez's must be used, and he did so using an accepted methodology on which he reasonably relied (C. 1802-04; A. 533-35).

Importantly, the trial court did not weigh any of this, because it erroneously determined at the outset that Dr. Perez's opinions lacked sufficient factual basis (C. 3923; A. 3). Indeed, it stated, "This Court cannot even determine if these opinions are based upon methodology or scientific principles that are generally accepted by the scientific community because they lack a reliable foundation, that is, they are not based on sufficient facts or data" (C. 3923; A. 3). As Mr. Molitor explained above, this was error.

To the extent Dr. Perez's factual basis for his opinions are weighable at all, then like the expert in *Noakes* they were more than sufficient. The trial court stated Dr. Perez only based his opinion on his interview of Mr. Molitor and did not independently visit or take measurements at the trainyards where Mr. Molitor worked (C. 3923; A. 3). But Dr. Perez explained in his report and his deposition that Mr. Molitor's descriptions were only the starting point for his historical assessment, and instead he also used both scientific and railroad literature and air data from BNSF and other railroads to perform a historical exposure assessment, reconstructing Mr. Molitor's past exposures based on similar studies and data as interpreted through professional judgment (C. 1746, 1761, 1802-04; A. 477, 492, 533-35). Contrary to the trial court's suggestion, Dr. Perez's sources were not limited to Mr. Molitor, but instead cited 119 data sources, including interrogatory answers, scientific literature, personnel file documents, BNSF's rule books, operating codes, and hazard communication

programs, and reports and data from railroad air sampling tests (C. 1351-58; A. 82-89).

Moreover, even if Dr. Perez had relied solely on Mr. Molitor's words to determine he had suffered substantial exposure to diesel exhaust and herbicides, under the FELA, this still would be sufficient for the case to go to a jury. In *Harbin v. Burlington N. R.R. Co.*, 921 F.2d 129, 131-32 (7th Cir. 1990), the Seventh Circuit, applying *Frye* in an FELA case, held a plaintiff's expert could rely solely on the plaintiff's own descriptions to determine he had suffered a substantial exposure to soot. The Court recounted the plaintiff's detailed testimony of his soot exposure and held that under the FELA, which was a sufficient factual underpinning for the expert's testimony that the exposure was a likely cause of the plaintiff's heart attack. *Id.* "While expert testimony documenting the hazards posed by the presence of so many parts per million of soot in the air would certainly enhance [the employee]'s case, it is not essential under the regime of the statute." *Id.* at 132.

Dr. Perez's testimony did not implicate *Frye* and had a sufficient factual basis, any deficiencies in which go to its weight, not its admissibility. The trial court misapplied *Frye* in holding otherwise and erred in excluding his testimony.

The trial court also erred in excluding Dr. Chiodo's testimony. He, too, explained his methodology in detail, using two studies finding an association between lymphoma and herbicide and diesel exhaust

exposure, respectively, to corroborate his opinion based on his knowledge, training, and experience, that exposure to these carcinogens cause lymphoma (C. 1516-21; A. 247-52). He explained his method for doing so is generally accepted, including by the Federal Judicial Center (C. 1497-98, 1516; A. 228-29, 247). He testified it is generally accepted that exposure to diesel exhaust causes non-Hodgkin's lymphoma (C. 1462; A. 193). He also testified that his conclusion can be extrapolated from the two studies, based on his knowledge and expertise that these carcinogens cause lung cancer, which is a generally accepted principle, too (C. 1525-26; A. 256-57).

As in *Donaldson*, a *Frye* analysis is inappropriate for this. Extrapolation is a generally accepted scientific methodology. And it is particularly appropriate here, as Dr. Chiodo noted that proper epidemiological studies of causation of cancer, including non-Hodgkin's lymphoma, can be limited because of ethical and latency concerns, as the only way to create direct cause-and-effect studies is to intentionally expose people to toxins, and even then there would be a limitation in the study to establish cause-and-effect relationships because of the time it takes for a person to develop cancer from the last exposure (C. 1521-22; A. 252-53). The Supreme Court expressed the same concern in *Donaldson*, approving of extrapolation for this same reason there, too. 199 Ill.2d at 87.

As with Dr. Perez, plainly Dr. Chiodo's approach is not new or novel, either. Instead, it is generally accepted for determining

causation in difficult-to-study cancers. And it, too, has sufficient factual underpinnings, as Dr. Chiodo relied on deposition transcripts including Mr. Molitor's, discovery, Mr. Molitor's medical records, and Dr. Perez's report (C. 1401-02; A. 132-33). He also relied on his extensive knowledge, training, and experience (C. 1462, 1529; A. 193, 260).

The law of Illinois is that Dr. Chiodo's testimony did not implicate *Frye* and had a sufficient factual basis, especially given that this is a case under the FELA, not a general negligence case. Any deficiencies in the factual basis for his opinion go to its weight, not its admissibility. The trial court misapplied *Frye* in holding otherwise and erred in excluding his testimony.

This is not that "extremely rare instanc[e] where there is a zero probability either of employer negligence or that any such negligence contributed to the injury of an employee," such that BNSF in this FELA case can obtain summary judgment on causation. *Lynch*, 700 F.3d at 911 (citation omitted). The trial court erred in excluding Mr. Molitor's experts, and therefore erred in granting BNSF summary judgment on Mr. Molitor's FELA claims. This Court should reverse the trial court's judgment and remand this case for further proceedings.

Conclusion

This Court should reverse the trial court's order excluding Dr. Chiodo's and Dr. Perez's opinions and granting summary judgment to BNSF, and should remand this case for further proceedings.

Respectfully submitted,

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Certificate of Compliance

I certify that this brief conforms to the requirements of Rules 341(a) and (b). The length of this brief, excluding the words contained in the Rule 341(d) cover, the Rule 341(h)(1) statement of points and authorities, the Rule 341(c) certificate of compliance, the certificate of service, and those matters to be appended to the brief under Rule 342, is 12,185 words.

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