

File Name: 09a0078p.06

**UNITED STATES COURT OF APPEALS**  
**FOR THE SIXTH CIRCUIT**

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ELIZABETH A. GASS, DEBORAH DEJONGE,  
*Plaintiffs-Appellants,*

v.

MARRIOTT HOTEL SERVICES, INC., ECOLAB,  
INC.,  
*Defendants-Appellees.*

No. 07-1733

Appeal from the United States District Court  
for the Western District of Michigan at Grand Rapids.  
No. 05-00856—Robert Holmes Bell, District Judge.

Argued: July 22, 2008

Decided and Filed: March 3, 2009

Before: BOGGS, Chief Judge; MOORE and CLAY, Circuit Judges.

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**COUNSEL**

**ARGUED:** Peter D. Bosch, STRAIN, MURPHY & VANDERWAL, Grand Rapids, Michigan, for Appellants. Richard G. Morgan, BOWMAN & BROOKE, Minneapolis, Minnesota, for Appellees. **ON BRIEF:** Peter D. Bosch, Joseph P. VanderVeen, STRAIN, MURPHY & VANDERWAL, Grand Rapids, Michigan, for Appellants. Ronald C. Wernette Jr., BOWMAN & BROOKE, Troy, Michigan, for Appellees.

CLAY, J., delivered the opinion of the court, in which MOORE, J., joined. BOGGS, C. J. (pp. 23-31), delivered a separate dissenting opinion.

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**OPINION**

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CLAY, Circuit Judge. Plaintiffs, Elizabeth A. Gass and Deborah DeJonge, appeal the district court's grant of summary judgment to Defendants, Ecolab, Inc. ("Ecolab") and Marriott Hotel Services, Inc. ("Marriott"). Plaintiffs sued Defendants under Michigan law, claiming that they were poisoned by pesticides during their stay at a Marriott hotel in Maui,

Hawaii. Plaintiffs allege that employees of Ecolab, which provides extermination services for Marriott, sprayed their belongings with an unknown pesticide and filled their hotel room with toxic vapors, causing Plaintiffs to become ill. The district court granted summary judgment to Defendants, holding that no reasonable jury could conclude that Defendants' negligence caused Plaintiffs' injuries. We disagree, and accordingly **REVERSE** the grant of summary judgment and **REMAND** this case to the district court for trial.

## **BACKGROUND**

### **I. FACTUAL HISTORY**

On September 6, 2004, Plaintiffs were guests in a Maui hotel operated by Marriott. That day, DeJonge filed a complaint with the hotel after she discovered a dead cockroach in her room, and a hotel employee eventually removed the roach. The next day, while Plaintiffs were away from their room, three employees of Ecolab entered Plaintiffs' room, bringing with them at least one unidentified pesticide. Ecolab provides pest extermination services to Marriott.

#### **A. Plaintiffs' Exposure to Pesticides**

Although the parties offer opposing views of what happened while the Ecolab exterminators were in Plaintiffs' hotel room, Defendants concede that the summary judgment standard requires this Court to credit Plaintiffs' testimony regarding the exterminators' actions. According to Plaintiff DeJonge, she was relaxing on the beach with Plaintiff Gass when she decided to retrieve lunch money from the hotel room. DeJonge left the beach and walked to the ground-level hotel room, entering through a sliding glass door. Immediately upon entry, she discovered three men in the room. Two of the men were wearing metal tanks on their backs and masks on their faces, and were spraying a chemical from those tanks. According to DeJonge, there was a "thick, horrid, acrid putrid odor" in the room, and the air was "sort of cloudy." (J.A. 490–91.) DeJonge also states that the haze of chemicals in the room was so thick that she could "see it, smell it, taste it, feel it." (J.A. 494.)

Upon noticing the three men, DeJonge immediately began screaming at the men to stop spraying, and accused them of "ruining [her] stuff," much of which was laid out in suitcases on the floor. (J.A. 492–93.) In response to her demands, DeJonge testified that one

of the men “shot [her] a dirty look,” yelled something in a language she did not understand, and resumed spraying. (J.A. 493.) At this point, DeJonge picked up the phone, called the hotel desk, and asked for the manager to meet her outside of the hotel room. She then left the room to wait for the manager.

When the manager arrived, DeJonge relayed what had happened in the room, and demanded that they be given a new room immediately because “we need to get our stuff out of there before . . . it gets more ruined.” (J.A. 496.) DeJonge added that “I can’t stand the smell in there. I think it’s making me sick.” (*Id.*) The manager acquiesced, and called a bellhop to help DeJonge move her belongings to a new room. DeJonge then left to find Gass and let her know what happened.

DeJonge found Gass and explained why they needed to retrieve their belongings and switch rooms. By the end of this conversation, which lasted about six or seven minutes, DeJonge began to feel ill. Nevertheless, both women returned to the room, where they spent about two-and-a-half minutes gathering their belongings. Neither DeJonge nor Gass identified the specific chemical that Ecolab used to fumigate their room.

Although Defendants concede that the summary judgment standard requires that this Court accept Plaintiffs’ version of events, Defendants offer a different version of how the exterminators acted. According to testimony by Michael Medeiros, an Ecolab exterminator, he and one co-worker entered Plaintiffs’ room just thirty seconds before DeJonge arrived. According to Medeiros, neither Ecolab employee had sprayed any pesticides before DeJonge entered the room. Medeiros claims that his co-worker made “two quick squirts” of an insecticide from an aerosol can similar to those commercially available at retail stores, and that no other chemicals were sprayed in the room. (J.A. 481.) Medeiros further testified that, immediately after the exterminator made these “quick squirts,” DeJonge became “very upset,” and began yelling at Medeiros and his co-worker. (*Id.*) The two men left the room, and Medeiros claims that he heard DeJonge say “my stuff is ruined” as they were leaving. (*Id.*)

Medeiros also testified regarding the kinds of chemicals Ecolab typically used in servicing the Marriott hotel, identifying three kinds of insecticides used to target cockroaches. The first, and least potent, of these chemicals is a pesticide called “SSI-50,”

which is normally sprayed from a twelve-ounce aerosol can. Additionally, Medeiros identified two more-potent pesticides—“Suspend SC” and “Demand CS”—that were commonly used by Ecolab at the time of Plaintiffs’ trip to Hawaii. Suspend SC and Demand CS are sold in concentrated form, then mixed with water in a pump sprayer or similar container to apply the pesticide. Medeiros claims that, on September 7, 2004, the day Plaintiffs’ room was sprayed, only SSI-50 was used, and a report he filed that day corroborates his claim.

### **B. Plaintiffs’ Illness**

A short time after their exposure to pesticides in the hotel room, Plaintiffs contacted the hotel manager and complained of “numbness to their tongues, stomach aches, and seeing stars.” (J.A. 370.) The manager arranged transportation to a nearby urgent care center, and Plaintiffs received medication for their symptoms.

Upon their return to Michigan, Plaintiffs initially sought treatment from Dr. Robert DeJonge, an osteopathic physician and Plaintiff DeJonge’s husband.<sup>1</sup> Dr. DeJonge, however, eventually referred Plaintiffs to Dr. Gerald Natzke, a physician specializing in environmental medicine.<sup>2</sup> During her appointment with Dr. Natzke on October 19, 2004, DeJonge informed Dr. Natzke that she had developed various symptoms within fifteen minutes of her exposure to the pesticides, including “a headache, swelling of her tongue, hands, feet and face, profuse itching, dizziness, shortness of breath and . . . drooling.” (J.A. 846.) By the time of her appointment, DeJonge’s symptoms included “a slurring and swollen tongue, complaints of a foul taste in her mouth, drooling and complaints of fatigue and pain in her muscles and joints,” in addition to a need to “take afternoon naps which wasn’t the case before the incident on September 7, 2004[,] . . . diarrhea and [] a droopy left eye.” (*Id.*)

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<sup>1</sup>Unless otherwise indicated, “DeJonge” will refer to Ms. DeJonge, not Dr. DeJonge.

<sup>2</sup>Physicians specializing in environmental medicine treat “adverse reactions experienced by an individual on exposure to an environmental excitant,” such as a pesticide. *See* American Academy of Environmental Medicine, What Is Environmental Medicine?, <http://www.aaemonline.org/introduction.html> (last visited August 11, 2008).

Gass had her first appointment with Dr. Natzke on October 22, 2004, and complained of “achiness all over, chills, sweats, fever, blisters on her tongue, droopiness on the right side of her face, muscle spasms, dizziness, blurred vision and memory problems.” (J.A. 847.) Like DeJonge, Gass told Dr. Natzke that within ten to fifteen minutes of her exposure to the pesticides, she developed “weakness and fatigue and had a green/gray tongue which she said turned black about 1½ weeks later.” (*Id.*)

According to Dr. Natzke, both women also exhibited neurological symptoms, including “brain fog, memory loss [and] mood swings.” (J.A. 848.) He administered a “visual contrast sensitivity test” to Gass, which Dr. Natzke said “she failed miserably” and had “one of the worst test results I have seen.” (*Id.*) Gass’ poor performance on the vision test indicated to Dr. Natzke “that she was exposed to neurotoxins.” (*Id.*) Dr. Natzke added that “[a]ll pesticides contain neurotoxins.” (*Id.*) Dr. Natzke also noted that both women “exhibited black tongues” at some point since he began treating them, a symptom that he attributed to pesticides in their system. (*Id.*)

Based on their symptoms, Dr. Natzke diagnosed both DeJonge and Gass with “acute pesticide exposure.” (J.A. 846–47.) However, he could not identify the particular pesticide to which Plaintiffs were exposed. Although a test for pyrethroids and other chemical compounds found in SSI-50 (the least potent of the three pesticides purportedly used at the Marriott in Maui) did not reveal “detectable levels” of such compounds in Plaintiffs’ systems, Dr. Natzke did not rule out the possibility that Gass and DeJonge were exposed to SSI-50 because “the concentration of chemicals from the pesticide contamination . . . would have been diluted in their blood by the time I saw them in mid-October.” (J.A. 847.) Dr. Natzke did not test Plaintiffs for other toxins because “there are tens of thousands of chemicals and it is impossible to test for all such chemicals without specifically knowing what chemical a person was exposed to.” (*Id.*)

### C. Defendants' Experts

Despite the uncertainty regarding which toxin or toxins Plaintiffs were exposed to, Defendants introduced substantial expert testimony indicating that SSI-50 could not have caused the symptoms experienced by Plaintiffs. First, Defendants point to a report by Marcia van Germert, Ph.D., a toxicologist with a doctorate in Pharmacology and Biochemistry. Although Dr. van Germert did not examine the toxic effects of any substance other than SSI-50, she concludes that “no peer reviewed study” demonstrates that the chemicals in SSI-50 have “ever produced a toxic effect in humans, or produced the symptoms alleged by the plaintiffs” when those chemicals are used merely for “crack and crevice application.” (J.A. 180.)

Similarly, the record contains a report by H. James Wedner, MD, chief of the Division of Allergy and Immunology Medicine of the Washington University School of Medicine. According to Dr. Wedner, “throughout the ages there have been individuals who have developed conditions that have defied characterization.” (J.A. 196.) Dr. Wedner suggests that Plaintiffs may be suffering from such a condition which “do[es] not seem to have an obvious cause.” (*Id.*) Nevertheless, Wedner concluded that neither Gass nor DeJonge “suffered any health problems that are related to their potential exposure to Ssi-50 [sic] in their hotel room in Maui on September 7, 2004.” (J.A. 191.) Dr. Wedner provides no analysis regarding the possible effect of Suspend SC, Demand CS, or any other pesticide on Plaintiffs.<sup>3</sup>

Finally, the record contains a report by Elissa P. Benedek, MD, a clinical psychiatrist who holds faculty appointments at three universities. Dr. Benedek attempts to dismiss Plaintiffs' symptoms as merely psychosomatic, concluding that both DeJonge and Gass have “demonstrated a tendency to react to stress in the past with physical symptoms, and now continue[] to react to psychological stressors with physical

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<sup>3</sup>The record also contains a report from Dr. Gary Bennett, an Entomology professor at Purdue University. After surveying the legal landscape governing pesticide use, Dr. Bennett ultimately concludes that “Ecolab's treatment was proper, including the selection of products, and the treatment method and amount of product used.” (J.A. 129.) It is unclear from Dr. Bennett's report, however, what the basis of his conclusions might be.

symptoms and complaints.” (J.A. 225, 242) According to Dr. Benedek, Gass and DeJonge’s symptoms resulted from nothing more than a psychological reaction to stress.

## **II. PROCEDURAL HISTORY**

Plaintiffs filed this diversity case in the Western District of Michigan on December 29, 2005, alleging that Defendants negligently exposed them to pesticides and that this exposure was the cause of their subsequent illness. After discovery, Defendants moved for summary judgment. On May 8, 2007, the district court granted Defendants’ motion for summary judgment. This appeal followed.

## **DISCUSSION**

### **I. CHOICE OF LAW**

Federal courts sitting in diversity apply the choice of law provisions of the forum state. *NILAC Int’l Mktg. Group v. Ameritech Servs., Inc.*, 362 F.3d 354, 358 (6th Cir. 2004). Because Plaintiffs filed this case in the Western District of Michigan, Michigan choice of law provisions apply. *Id.*

Michigan choice of law provisions favor allowing Michigan residents to bring suit in Michigan courts under Michigan law. *See Olmstead v. Anderson*, 400 N.W.2d 292, 302–03 (Mich. 1987). Generally speaking, a tort claim filed in a Michigan court will be governed by Michigan law “unless a ‘rational reason’ exists to displace it.” *Watkins & Son Pet Supplies v. Iams Co.*, 254 F.3d 607, 611 (6th Cir. 2001) (quoting *Olmstead*, 400 N.W.2d at 305). Moreover, the fact that a tort took place outside of Michigan is not itself a sufficient reason to apply a different state’s law. *See Olmstead*, 400 N.W.2d at 302 (holding that the fact that an accident occurred outside of Michigan is of no “great or particular significance” in determining which state’s law to apply in a tort suit). Additionally, although Michigan courts recognize that applying Michigan law rather than the law of the state in which the tort allegedly took place might lead to forum shopping, “[t]here is no forum-shopping concern when the forum is also the plaintiff’s state of citizenship.” *Id.* at 303.

Plaintiffs are Michigan residents, and they present no arguments why the law of Hawaii or any other state should apply. Accordingly, we see no reason to displace Michigan's presumption that Michigan substantive law governs tort suits brought within its borders. *See id.* at 302–03. However, under *Erie Railroad Co. v. Tompkins*, 304 U.S. 64 (1938), federal law governs procedural issues, including evidentiary rulings made pursuant to the Federal Rules of Evidence. *Legg v. Chopra*, 286 F.3d 286, 289 (6th Cir. 2002).

## **II. THE ADMISSIBILITY OF PLAINTIFFS' EXPERTS' TESTIMONY**

### **A. Standard of Review**

We review a district court's ruling regarding the admissibility of expert testimony for abuse of discretion. *Aetna Cas. & Sur. Co. v. Leahey Constr. Co.*, 219 F.3d 519, 544 (6th Cir. 2000). "In the context of an evidentiary ruling, abuse of discretion exists when the reviewing court is firmly convinced that a mistake has been made regarding admission of evidence." *Id.* (quoting *Polk v. Yellow Freight Sys., Inc.*, 876 F.2d 527, 532 (6th Cir. 1989)).

### **B. Analysis**

As a threshold matter, Plaintiffs contest the district court's decision to exclude statements by Dr. DeJonge and Dr. Natzke as unreliable opinion testimony. Generally, a treating physician may provide expert testimony regarding a patient's illness, the appropriate diagnosis for that illness, and the cause of the illness. *See Fielded v. CSX Transp., Inc.*, 482 F.3d 866, 870 (6th Cir. 2007). However, a treating physician's testimony remains subject to the requirement set forth in *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579 (1993), that an expert's opinion testimony must "have a reliable basis in the knowledge and experience of his discipline." *Id.* at 592. Under *Daubert*, before allowing an expert's testimony to be considered by the jury, a trial court should consider: (1) whether the reasoning or methodology underlying the expert's testimony is scientifically valid; and (2) whether that reasoning or methodology properly



could be applied to the facts at issue to aid the trier of fact.” *United States v. Smithers*, 212 F.3d 306, 315 (6th Cir. 2000).

In assessing whether Dr. DeJonge and Dr. Natzke’s testimony satisfies the requirements of *Daubert*, the district court concluded that Dr. DeJonge and Dr. Natzke could testify as to Plaintiffs’ “symptoms, tests, diagnosis, and treatment.” *Gass v. Marriott Hotel Servs., Inc.*, 501 F. Supp. 2d 1011, 1021 (W.D. Mich. 2007). The district court determined that both doctors “are experienced physicians and are qualified to diagnose medical conditions and treat patients.” *Id.* at 1019. However, with respect to the doctors’ “causation opinions,” the district court concluded that “Dr. Natzke and Dr. DeJonge have not demonstrated a scientifically reliable method to support their conclusions as to causation in this particular matter and may not be permitted to testify as to the cause of Plaintiffs’ symptoms.” *Id.* at 1021. The district court reasoned that “[t]he ability to diagnose medical conditions is not remotely the same . . . as the ability to deduce, delineate, and describe, in a scientifically reliable manner, the causes of those medical conditions.” *Id.* at 1019 (quoting *Wynacht v. Beckman Instruments, Inc.*, 113 F. Supp. 2d 1205, 1209 (E.D. Tenn. 2000)). Because “Dr. Natzke and Dr. DeJonge have not based their causation opinions on any testing data,” and the only blood tests which Dr. Natzke relied on “did not reveal any detectable levels for the products the lab tested for,” the district court found that neither physician had a scientific basis for their “causation opinion.” *Id.* at 1019, 1021.<sup>4</sup>

Insofar as the district court permitted Dr. DeJonge and Dr. Natzke to offer a diagnosis, while excluding testimony on matters outside of their professional experience, the district court’s decision is similar to *Dickenson v. Cardiac & Thoracic Surgery of*

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<sup>4</sup>While the district court’s decision to exclude the doctors’ “causation opinion” could be seen as inconsistent with its decision to allow the doctors to testify regarding their diagnosis of Plaintiffs’ condition as acute pesticide exposure, the district court’s conclusions likely recognize that, although both doctors are competent to testify regarding Plaintiffs’ diagnosis (even if the diagnosis necessarily implies exposure to pesticides), neither doctor is competent to testify regarding the specific pesticide and the time frame of exposure. The district court emphasized that neither doctor engaged in testing that revealed the particular pesticide Plaintiffs were exposed to, and neither doctor “referenced any scientific literature establishing a connection between Plaintiffs’ exposure to some unknown pesticide and symptoms that they continue to experience over two years after the exposure.” *Gass*, 501 F. Supp. 2d at 1020. Thus, the district court ruled that while Dr. Natzke and Dr. DeJonge are competent to testify that Plaintiffs are suffering from pesticide exposure, neither is competent to testify regarding whether Defendants caused this exposure.

*Eastern Tenn., P.C.*, 388 F.3d 976 (6th Cir. 2004). In *Dickenson*, we considered the expert testimony of Dr. Johnson, a cardiac surgeon, regarding the cause of a patient's brain injuries. Dr. Johnson testified that the patient's injuries resulted from premature removal of her ventilation tube, *id.* at 978-79, and that the patient's cardiac surgeon was responsible for the decision to prematurely extubate the patient, *id.* at 982. In holding that Dr. Johnson could testify that the patient suffered injuries as a result of premature extubation, the court in *Dickenson* disagreed with the district court's conclusion that, because Dr. Johnson was neither a pulmonologist nor familiar with scholarly literature in the field of pulmonology, he was not qualified to provide expert testimony regarding whether the patient should have been extubated. *Id.* at 980.

According to *Dickenson*, a physician need not “demonstrate a familiarity with accepted medical literature or published standards in [an area] of specialization in order for his testimony to be reliable in the sense contemplated by Federal Rule of Evidence 702.” *Id.* Rather, “the text of Rule 702 expressly contemplates that an expert may be qualified on the basis of *experience*.” *Id.* (quoting Fed. R. Evid. 702 advisory committee's note); *see also Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 156 (1999) (“[N]o one denies that an expert might draw a conclusion from a set of observations based on extensive and specialized experience.”). The exclusion of a medical doctor's professional opinion, rooted in that doctor's “extensive relevant experience,” is “rarely justified in cases involving medical experts as opposed to supposed experts in the area of product liability.” *Dickenson*, 388 F.3d at 982. Because Dr. Johnson stated in his affidavit that he is “involved with extubation decisions on almost a daily basis,” the court concluded that his significant experience qualified him to testify as to whether another physician prematurely extubated a patient. *Id.* at 978.

The court in *Dickenson* reached the opposite conclusion with respect to Dr. Johnson's testimony that the patient's cardiac surgeon—as opposed to the patient's pulmonologist—was at fault for the decision to prematurely extubate the patient. *Id.* at 982. The court reasoned that there was no support for Dr. Johnson's opinion that the patient's cardiac surgeon was at fault for the premature extubation because Dr. Johnson

testified to nothing in his experience which supported his theory that the cardiac surgeon was somehow responsible for the pulmonologist's decision. Thus, *Dickenson* stands for the proposition that a medical doctor is generally competent to testify regarding matters within his or her own professional experience. *See id.* at 982. When, however, the doctor strays from such professional knowledge, his or her testimony becomes less reliable, and more likely to be excluded under Rule 702. *See id.* at 982–83.

In light of this reading of *Dickenson*, we believe that the district court did not abuse its discretion. Both Dr. DeJonge and Dr. Natzke relied on professional experience in diagnosing and treating Plaintiffs. Specifically, Dr. Natzke stated in an affidavit that he relied on his experience treating “thousands of patients for environmental medicine issues including pesticide and/or other chemical contamination.” (J.A. 846.) Under *Dickenson*, both Dr. DeJonge and Dr. Natzke are competent to testify with respect to Plaintiffs' diagnosis to the extent that they rely on professional education or experience. *See* 388 F.3d at 982. Conversely, nothing in Dr. DeJonge's or Dr. Natzke's medical expertise would provide a basis to determine the exact chemical Plaintiffs were exposed to at the Marriott hotel. In addition, because Defendants did not disclose that Plaintiffs possibly were exposed to Demand CS or Suspend SC until very late in the discovery process, the doctors could not run tests to determine whether Plaintiffs actually were exposed to such chemicals, which would have provided a basis for the doctors' causation opinion. Accordingly, similar to the expert witness in *Dickenson* who lacked a basis in experience or personal knowledge regarding which doctor made the decision to prematurely extubate a patient and, as a result, could not testify regarding which doctor ordered the extubation, *id.*, Dr. DeJonge and Dr. Natzke cannot rely on their general knowledge of pesticides to testify regarding the specific pesticide that caused Plaintiffs' symptoms, or when Plaintiffs' exposure to that pesticide occurred.

The district court correctly permitted Dr. DeJonge and Dr. Natzke to testify regarding their diagnosis of Plaintiffs, and properly excluded their testimony regarding where and when Plaintiffs were exposed to pesticides. Therefore, the district court did

not abuse its discretion in limiting Dr. DeJonge and Dr. Natzke's testimony to matters within their professional experience or personal knowledge.

### **III. THE DISTRICT COURT'S GRANT OF SUMMARY JUDGMENT**

#### **A. Standard of Review**

The district court granted summary judgment to Defendants with respect to Plaintiffs' negligence claims. *Gass*, 501 F. Supp. 2d at 1026. A district court's grant of summary judgment is reviewed *de novo*. *Farhat v. Jopke*, 370 F.3d 580, 587 (6th Cir. 2004). The district court's grant of summary judgment should be affirmed when "the discovery and disclosure materials on file, and any affidavits show that there is no genuine issue as to any material fact" as to an essential element of the non-moving party's case. Fed. R. Civ. P. 56(c). An issue of fact is "genuine" if a reasonable person could return a verdict for the non-moving party. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986). After the moving party has satisfied its burden, the burden shifts to the non-moving party to set forth "specific facts showing that there is a genuine issue for trial." *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587 (1986). When no genuine issues of material fact exist, this Court reviews *de novo* the district court's conclusions of substantive law. *Farhat*, 370 F.3d at 588.

#### **B. Analysis**

Plaintiffs argue that the district court erred in granting summary judgment to Defendants on the grounds that, absent expert testimony linking Plaintiffs' symptoms to a particular pesticide, no reasonable jury could have found that Defendants negligently caused Plaintiffs' illness. We agree.

We first emphasize that, in deciding a motion for summary judgment, we must draw all justifiable inferences in favor of Plaintiffs as the non-moving party, and "[Plaintiffs'] evidence is to be believed." *Martin v. Toledo Cardiology Consultants, Inc.*, 548 F.3d 405, 410 (6th Cir. 2008) (citing *Liberty Lobby*, 477 U.S. at 255). According to Plaintiff DeJonge, she returned to her hotel room to find men in masks spraying chemicals. She testified that there was a "thick, horrid, acrid putrid odor" in

the room, and that the air was “sort of cloudy.” (J.A. 490–91.) The haze of chemicals in the room was so thick that she could “see it, smell it, taste it, feel it.” (J.A. 494.) Within fifteen minutes of her exposure to the “cloud,” DeJonge claims that she became ill. Similarly, Plaintiff Gass testified that she began to experience symptoms shortly after her exposure to the cloud of pesticides in the hotel room. We conclude that, should a jury credit Plaintiffs’ testimony and the other evidence supporting Plaintiffs’ claim, a reasonable jury could find that Defendants are liable for causing Plaintiffs’ injuries.

Plaintiffs claim that Defendants’ negligence caused their illnesses. Accordingly, as in any case alleging simple negligence under Michigan law, Plaintiffs must demonstrate: “(1) that defendant owed them a duty of care, (2) that defendant breached that duty, (3) that plaintiffs were injured, and (4) that defendant’s breach caused plaintiffs’ injuries.” *Henry v. Dow Chem. Co.*, 701 N.W.2d 684, 688 (Mich. 2005). Defendants argue on appeal, and the district court held, that Plaintiffs have failed to demonstrate both that Defendants breached a duty of care and that such a breach caused Plaintiffs’ injuries. We consider each of these arguments below.

### **1. Duty of Care**

Defendants characterize Plaintiffs’ negligence claim as an allegation that Defendants violated the professional standard of care governing exterminators, and therefore conclude that Plaintiffs’ claim must fail because Plaintiffs failed to present expert testimony to establish the standard of care applicable to exterminators. The dissent agrees and, although it acknowledges that the case is “not a ‘professional care’ case,” Dissenting Op. at 26, it argues that, “[i]n Michigan, expert testimony in professional negligence (and toxic tort) cases like this one is required to avoid summary judgment . . .,” *id.* However, Michigan law does not require expert testimony under the circumstances presented in this case. The cases the dissent cites, such as *Lince v. Monson*, 108 N.W.2d 845 (Mich. 1961), address medical malpractice claims against, for example, a surgeon performing a complex medical procedure, not an exterminator spraying pesticides.

The dissent also asserts that “these cases require expert testimony in complex, professional, or scientific-based negligence cases.” Dissenting Op. at 26. While the dissent’s statement is literally true—medical malpractice cases do involve “complex, professional, and scientific-based” questions—the dissent’s use of such cases to require Plaintiffs to produce expert testimony under the circumstances is entirely misleading. In the medical malpractice context, as demonstrated by the cases the dissent relies on, the applicable standard of care generally is “beyond the ken of laymen.” *Thomas v. McPherson Cmty. Health Ctr.*, 400 N.W.2d 629, 705 (Mich. Ct. App. 1986). As a result, “in an action for malpractice against a hospital, expert testimony is required to establish the applicable standard of conduct, the breach of that standard, and causation.” *Id.* As the Michigan Supreme Court has recognized, proving negligence and causation in medical malpractice cases is different than in ordinary negligence cases. In a case involving “conduct, like that of a surgeon, resting upon judgment, opinion, or theory, the ordinary rules for determining negligence do not prevail.” *Lince*, 108 N.W.2d at 848 (internal quotation marks omitted) (citation omitted). Pervasively spraying pesticides within an enclosed room inhabited by humans, however, is not “conduct . . . resting upon judgment, opinion, or theory,” and is not a “matter[] of special knowledge strictly involving professional skill.” *Id.* Although Michigan courts require plaintiffs to produce an expert in medical malpractice cases to explain the applicable standard of care, Michigan law does not require Plaintiffs to present expert testimony regarding the standard of care applicable to spraying chemicals in the confined quarters of an occupied room.

Accordingly, Plaintiffs’ claim in the present case that Defendants negligently sprayed pesticides is more akin to an ordinary negligence case than a claim involving professional negligence. The dissent’s attempt to classify Plaintiffs’ claim as one involving professional negligence is not supported by Michigan case law. Thus, even in the absence of expert testimony regarding “how the room *should* have been sprayed or how the risk of chemical poisoning *should* have been reduced,” Dissenting Op. at 25, Michigan law does not prevent Plaintiffs from avoiding summary judgment in the

absence of expert testimony where the factfinder is able to weigh and evaluate the evidence based on his or her ordinary experience.

Through their testimony, Plaintiffs allege that men in masks entered their hotel room and, despite the presence of Plaintiffs' suitcases and similar indications that the room was in use, sprayed such a thick concentration of pesticides that a "thick, horrid, acrid[,] putrid" cloud of toxic chemicals filled the room. (J.A. 490.) Expert testimony is not necessary to allow a reasonable jury to conclude that such actions are negligent, inasmuch as an ordinary person understands that it is unacceptable to enter a place where another is residing and fill that place with airborne poison, without providing for evacuation of the inhabitants, appropriate ventilation, or taking other precautions.

Plaintiffs also have introduced evidence indicating that Defendants were aware of potential injuries that result from contact with at least two of the pesticides commonly used in exterminating cockroaches. By federal regulation, manufacturers of hazardous chemicals must produce a "material safety data sheet" ("MSDS"), and employers using such chemicals must keep a copy of the MSDS for each chemical that they use. 29 C.F.R. § 1910.1200(g)(1). Each MSDS must detail "[t]he health hazards of the hazardous chemical, including signs and symptoms of exposure, and any medical conditions which are generally recognized as being aggravated by exposure to the chemical." § 1910.1200(g)(2)(iv). According to the MSDS for Suspend SC, one of the pesticides used by Defendants, Suspend SC is "[h]armful if inhaled," and the MSDS warns that a person who does inhale the product should be "remove[d] to fresh air" and given "medical attention." (J.A. 527.) The MSDS for Demand CS offers even more serious warnings, instructing persons who may come in contact with the pesticide to wear protective clothing to avoid "[u]nprotected contact" with the chemical, and to either ensure that areas where Demand CS is being applied are well-ventilated or to have persons in the area wear respirators. (J.A. 535.) Indeed, mere skin contact with Demand CS is dangerous, and the MSDS for this pesticide warns that if the pesticide gets on a person's skin or clothing, that person should "[t]ake off contaminated clothing," [r]inse

skin immediately with plenty of water for 15-20 minutes,” and “[c]all [the manufacturer], a poison control center or doctor for treatment advice.” (J.A. 534.)

A reasonable person would understand that he or she could seriously injure another person by filling an occupied hotel room with a cloud of toxic or hazardous chemicals. Based on this fact, and the evidenced introduced by Plaintiffs indicating that Defendants were aware that at least some of the chemicals they routinely use could cause serious illness, a jury reasonably could find that Defendants were negligent in inundating an occupied hotel room with pesticide spray in the absence of any warnings to the occupants. Accordingly, the district court erred in granting summary judgment to Defendants on the ground that Plaintiffs failed to introduce expert testimony establishing that Defendants breached a duty of care.

## **2. Causation**

Defendants offer two arguments supporting their belief that no reasonable jury could find that the chemicals Plaintiffs allegedly were exposed to caused their illness. First, Defendants argue that, because Plaintiffs do not know exactly which chemical they were exposed to, a reasonable jury could not conclude that they were exposed to a chemical, dispensed by these Defendants, which could have caused their particular symptoms. Additionally, Defendants claim that expert testimony is required to establish causation. Neither of these claims has merit.

Defendants use three different chemicals to exterminate cockroaches at the Marriott in Maui: SSI-50, Demand CS, and Suspend SC, and Defendants admit that exterminators were in Plaintiffs’ hotel room in response to Plaintiffs’ earlier complaint of a dead cockroach in the room. Nevertheless, Defendants argue—without citing any cases—that, because Plaintiffs do not know exactly which chemical they were exposed to, “as a matter of law they cannot competently establish that such a mystery substance caused their claimed ailments.” (Def.’s Br. 39.)

Michigan law, however, requires only that a plaintiff claiming negligence prove his or her case by a preponderance of the evidence, and does not require that a plaintiff



alleging exposure to a harmful substance prove with certainty that he or she was exposed to a particular chemical. *See Liberty Mut. Ins. Co. v. Bay City, Water Dept.*, 116 N.W.2d 199, 200 (Mich. 1962). Therefore, Plaintiffs may survive summary judgment if a reasonable jury could find that it is more likely than not that Defendants caused Plaintiffs to be exposed to a sufficient quantity of a hazardous substance capable of causing their injuries.

Although Defendants introduced substantial expert testimony indicating that exposure to SSI-50 could not have caused Plaintiffs' illness, they declined to offer any evidence regarding the toxic properties of Demand CS and Suspend SC. While the record contains little evidence regarding the toxic effects of Suspend SC, based on the MSDS for Demand CS, a reasonable jury could conclude that Demand CS is capable of producing many of the symptoms experienced by Plaintiffs, especially because Defendants failed to introduce any evidence rebutting the MSDS's description of Demand CS as a highly dangerous toxin capable of causing a myriad of symptoms.

According to Dr. Natzke, Plaintiff DeJonge experienced a wide range of symptoms, including "a headache, swelling of her tongue, hands, feet and face, profuse itching, dizziness, shortness of breath . . . a slurring and swollen tongue, complaints of a foul taste in her mouth, drooling and complaints of fatigue and pain in her muscles and joints," in addition to a need to "take afternoon naps which wasn't the case before the incident on September 7, 2004 . . . diarrhea and [] a droopy left eye." (J.A. 846.) Plaintiff Gass experienced "achiness all over, chills, sweats, fever, blisters on her tongue, droopiness on the right side of her face, muscle spasms, dizziness, blurred vision and memory problems . . . weakness and fatigue and [] green/gray tongue which she said turned black about 1½ weeks later." (J.A. 847.)

The MSDS for Demand CS warns that it can cause many of these symptoms, including "central nervous system depression," "irritation to eyes, skin and respiratory tract," "headaches, dizziness, anesthesia, drowsiness . . . and other central nervous system effects." (J.A. 536.) Moreover, according to the MSDS, the chemicals in Demand CS target the liver, nervous system, kidney, blood, respiratory tract, skin and

eye. Although the MSDS does not account for all of Plaintiffs' symptoms, such as their discolored tongues, Dr. Natzke stated in his affidavit that this symptom could be attributed to pesticide poisoning.

Accordingly, viewing the evidence in the light most favorable to Plaintiffs as the non-moving parties, a reasonable jury could find that Plaintiffs' symptoms were caused by their exposure to the pesticides sprayed by Defendants. Plaintiffs have produced ample evidence to demonstrate that at least one of the chemicals Defendants routinely used to exterminate cockroaches, Demand CS, is capable of causing their symptoms. Plaintiffs further have testified that they were exposed to a visible and pungent cloud of pesticides after Defendants sprayed pesticides in their room while Plaintiffs occupied the room. It is also significant that Plaintiffs began experiencing symptoms within fifteen minutes of their alleged exposure to pesticides in their hotel room. In addition, Defendants have offered no evidence to refute the MSDS's representation of Demand CS as a chemical which could have caused Plaintiffs' symptoms.

Despite this evidence, Defendants argue that this Court's decision in *Kalamazoo River Study Group v. Rockwell International Corp.*, 171 F.3d 1065 (6th Cir. 1999), requires Plaintiffs to introduce an "essential element" of "admissible expert testimony" in order to prove causation. That case, however, cannot be read so broadly. *Kalamazoo River* was an environmental contamination case, involving 38 miles of shoreline which was polluted by the chemical polychlorinated biphenyl ("PCB"). *Id.* at 1066. The defendant in *Kalamazoo River* owned an automotive parts manufacturing plant, located 3200 feet from an entry into the tainted waterways, which leaked PCB into the surrounding soil in 1989. *Id.* at 1067. In 1993, the defendant, acting with the approval of state environmental authorities, undertook to repair any environmental damage caused by the 1989 leak. As a result of these efforts, the defendant excavated approximately 800 cubic yards of soil from the area surrounding the leak, and conducted soil studies revealing that PCB had traveled no farther than 1400 feet away from the site leak—1800 feet short of the nearby waterway. *Id.* at 1067, 1069. Nevertheless, in 1995, the

defendant was named in the *Kalamazoo River* lawsuit, which alleged that the 1989 leak had contributed to the PCB contamination along the 38 miles of shoreline. *Id.* at 1067.

In holding that the defendant could not be held liable for the PCB contamination along the shoreline, the court noted that the plaintiff presented no reliable expert testimony which refuted evidence showing that PCB from the 1989 leak never reached the nearby waterway. *Id.* at 1072–73. Accordingly, the court held that, “[t]he analytical gap between the evidence presented [by the plaintiff] and the inferences to be drawn . . . is too wide. Under such circumstances, a jury should not be asked to speculate on the issue of causation.” *Id.* at 1073 (quoting *Turpin v. Merrell Dow Pharms., Inc.*, 959 F.2d 1349, 1360–61 (6th Cir. 1992)).

Contrary to Defendants’ assertions, the principle governing *Kalamazoo River* is not applicable to Plaintiffs’ claims. Unlike in *Kalamazoo River*, where the defendant presented scientific evidence affirmatively demonstrating that it was not responsible for any PCB contamination along the shoreline, Defendants have presented nothing more than statements by their own agent—an exterminator who works for Defendants—claiming that neither Demand CS nor a similarly toxic chemical was used in Plaintiffs’ hotel room. In other words, while the *Kalamazoo River* defendant proved an absence of causation by introducing objectively verifiable scientific evidence, Defendants have not done so. Though it is certainly reasonable, as this Court held in *Kalamazoo River*, 171 F.3d at 1072–73, to require a party to refute scientific evidence with scientific evidence, Plaintiffs are not required to produce expert testimony on causation where Defendants have failed to offer scientific evidence regarding the effects of Demand CS or Suspend SC.

The complexity of the factual issue presented in *Kalamazoo River* also justified requiring the plaintiff to support its case with expert testimony. *Kalamazoo River* concerned whether a 1989 chemical spill, allegedly cleaned up in 1993, traveled through 3200 feet of soil to a nearby waterway, and then spread out along 38 miles of shoreline. *Id.* at 1066–67. Such an inquiry is beyond the capacity of twelve lay people, absent some assistance from an expert.

In contrast, Plaintiffs allege that they entered a room Defendants filled with a cloud of toxic chemicals, and became ill within fifteen minutes of their exposure to the toxins. Moreover, the record shows that exterminators acting on behalf of Defendants entered the room to exterminate cockroaches, and that at least one pesticide that Defendants use to control cockroaches—Demand CS—is capable of producing many of the symptoms from which Plaintiffs suffer. It does not take an expert to conclude that, under these circumstances, Defendants more likely than not are responsible for Plaintiffs’ injuries.

If anything, the decision in *Kalamazoo River* bolsters Plaintiffs’ case. Like the defendant in *Kalamazoo River*, who introduced scientific evidence showing that it was not responsible for PCB contamination along the shoreline, Plaintiffs have introduced scientific evidence—the MSDS—which shows that Demand CS is capable of causing their symptoms. *See* 171 F.3d at 1067. Defendants, like the plaintiff in *Kalamazoo River*, have introduced no evidence regarding the toxic effects of Demand CS. *See id.* at 1072–73. Defendants cannot excuse their failure to introduce expert testimony by accusing their adversaries of the same failure where other scientific evidence exists that tends to prove Plaintiffs’ case.

Should a jury credit Plaintiffs’ testimony, it reasonably could conclude that the alleged cloud of unidentified toxic chemicals sprayed in Plaintiffs’ hotel room caused Plaintiffs’ injuries. The dissent, however, asserts that Plaintiffs were required to produce expert testimony linking their exposure with their symptoms. According to the dissent, “ordinary understanding of everyday medical problems does not include the proposition that black tongue is ordinarily caused by spraying of pesticides.” Dissenting Op. at 30–31. The dissent appears to believe that a jury in Plaintiffs’ case would have to use its own knowledge to link pesticide exposure to Plaintiffs’ illness and its symptoms.<sup>5</sup>

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<sup>5</sup>The dissent asserts that Plaintiffs were required to produce expert testimony to establish causation in this case. To support its argument, the dissent cites to an unpublished decision from the Michigan Court of Appeals. *See* Dissenting Op. at 6–7 (citing *Trice v. Oakland Dev. Ltd. P’ship*, No. 278392, 2008 Mich. App. LEXIS 2484, at \*32 (Mich. Ct. App. Dec. 16, 2008)). While similar to the facts involved in this case, *Trice*, as the dissent acknowledges, relies primarily on the reasoning of the very district court decision which is before this panel on appeal. Further, under Michigan law, an unpublished opinion from the state court of appeals lacks precedential value and is not binding on state courts. Mich.

However, Dr. Natzke stated in his affidavit that, based on his experience in treating patients who have been exposed to pesticides, a discolored tongue is attributable to pesticide poisoning. Thus, contrary to the dissent's assertions, our conclusion that Plaintiffs were not required to produce expert testimony with respect to causation is not a conclusion that the causes of a black tongue are within the "ordinary understanding" of the jury.

We conclude that when a plaintiff claims that a defendant was negligent in filling a hotel room with a cloud of a poisonous substance, and there is evidentiary support for such claims, expert testimony is not required to show negligence, and the district court erred in holding otherwise.

#### **IV. PLAINTIFFS' MOTION TO EXTEND DISCOVERY**

Finally, we note that, at oral argument, Plaintiffs claimed that they would have presented more evidence indicating that they were injured by Demand CS or Suspend SC, but they were frustrated in their efforts to conduct discovery because Defendants did not provide Plaintiffs with documents showing that these two pesticides were used at the Maui Marriott until after the close of discovery. Although Plaintiffs filed a motion in the district court seeking to extend the length of discovery in light of Defendants' alleged failure to reveal damaging documents in a timely manner, the district court denied this motion, and Plaintiffs do not appeal the district court's ruling. Accordingly, we decline to review the district court's decision not to permit additional discovery. *See United States v. Corrado*, 304 F.3d 593, 611 n.12 (6th Cir. 2002) ("Arguments not developed in briefs on appeal are deemed waived by this court . . ."). We leave it to the district court on remand to determine whether to reopen discovery to expand the record prior to trial.

**CONCLUSION**

Accordingly, for the reasons set forth above, we **REVERSE** the grant of summary judgment to Defendants and **REMAND** this case to the district court for a jury trial.

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**DISSENT**

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BOGGS, Chief Judge, dissenting. This case basically boils down to the relative import of two Latin phrases: “*post hoc ergo propter hoc*” and “*res ipsa loquitur*.” The former is a well known logical fallacy (recognized as such since Aristotle’s *Rhetoric*). It is the fallacy of saying that because effect A happened at some point after alleged cause B, the alleged cause was the actual cause. Such logic has never been enough to survive summary judgment. See, e.g., *Abbott v. Federal Forge*, 912 F.2d 867, 875 (6th Cir. 1990) (“[P]ost hoc, ergo propter hoc is not a rule of legal causation.”).

The latter phrase applies to a narrow class of cases in which the connection between an untoward effect and some type of fault is so clear (and the likelihood of an alternative explanation so low) that no other evidence is required to uphold a jury verdict. The original, and classic, exposition of this principle is *Byrne v. Boadle*, 159 Eng. Rep. 299 (Exch. 1863), a nineteenth century English case where a pedestrian on the streets of Liverpool was struck by a barrel of flour that came flying out of the second-story window of a commercial storeroom. As I will explain below, it seems clear to me that the venerable British case does not describe the case before us. A barrel of flour is extremely unlikely to come flying out onto a city street without some fault by those charged with the care of similar barrels, and it is also extremely unlikely that the flying barrel of flour came from any place other than the adjacent flour warehouse.

In our case, the plaintiffs’ symptoms, which worsened at a later time and after medical care, and which are known to have a wide variety of possible causes, are much less obviously connected to an unspecified dose of a potentially poisonous pesticide. Instead, finding fault, without more, in the latter circumstances represents classic *post hoc* reasoning. Something potentially causative happened at one time; something untoward happened at a later time. Therefore, plaintiffs allege, the latter must have been caused by the former. The applicable law of Michigan does not permit that unsubstantiated connection to be made, and that is why expert opinion is required. I

therefore respectfully dissent from the majority's invocation of *res ipsa* in a case where it is not warranted.

## I

This case involves assessing the connection between exposure to some chemical substance and a series of physical symptoms that are generally attributable to a wide variety of causes. The district court held that the experts that the plaintiffs relied on to connect the alleged exposure (and the defendant's behavior relating to it) to the plaintiffs' symptoms could not testify to any causal relationship. The majority affirms that decision but nevertheless reverses summary judgment, holding that ordinary experience suffices to connect any chemical used (regardless of composition or dose) to the symptoms. In my view, this resolution is not supported by common sense or by the Michigan law that governs the case. Both counsel that a lay juror cannot be expected to understand the complex medical and scientific facts that necessarily underlie any such an attribution of fault and, accordingly, require expert explanation prior to allowing a jury verdict. The majority's assessment that in this case (and, one supposes, unlike in most toxic tort cases) there is sufficient evidence for the jury to charge plaintiffs' illnesses to the defendants because the illness began to develop reasonably soon after the exposure – which is only *post hoc ergo propter hoc* – reinforces rather than refutes this preference for expertise.

To fully understand the weight that the majority asks the *post hoc* fallacy to bear, it is useful to begin with a point of agreement between the majority and this opinion. The plaintiffs hoped that their treating physicians could testify not just to the physical symptoms with which they were diagnosed but also to the likely cause of such symptoms. That testimony would have concluded that the plaintiffs' illnesses were explained best by chemical poisoning and that the exposure to whatever pesticides defendants had used was the best explanation of how plaintiffs came in contact with the chemicals that poisoned them. As rehearsed and affirmed in the majority opinion, the district court held that these doctors lacked sufficient expertise to make the causal connection alleged by plaintiffs.



Plaintiffs also proffered the testimony of a second set of experts to demonstrate duty and breach. These liability experts (whose exclusion was not challenged on appeal) would have testified to the dangers of pesticides and an appropriate standard of care for their use. The district court excluded them because they prepared no report and did not plan to give an opinion about the chemicals that defendants actually used or the precautions defendants actually undertook.

Together, this missing expert testimony means that the summary judgment record contains no admissible evidence that directly shows a breach of duty or that shows causation between the alleged breach and the illnesses. To be sure, the plaintiffs' evidence recounts the spraying of the pesticide and details the potential toxicity at some unspecified dose of the chemicals that probably were sprayed by defendants. But establishing these propositions does not establish how the room *should* have been sprayed or how the risk of chemical poisoning *should* have been reduced. That is, the evidence does not tend to prove that the defendants' activities, in light of the relevant standard of care, were negligent or that the chemicals that were sprayed caused the illness.

Of course, the absence of evidence is not the same as evidence of absence. The majority holds that in the place of the absent evidence there is sufficient circumstantial evidence of breach and causation. Specifically, the historical fact that some illness came quickly on the heels of exposure speaks for itself and makes up for the otherwise missing causal links.

## II

Thus presented, the question is whether the plaintiffs needed expert testimony in this case to prove how much chemical exposure is too much chemical exposure or to prove whether the amount of exposure actually caused the alleged harmful consequence. In my view, the majority pays too little attention to this issue, rushing from the fact of exposure and odd symptoms to the legal conclusion of fault. It is of course correct that under Michigan law some complex cases involve breach or causation questions within the ken of the jury notwithstanding the professional or scientific nature of the litigation.

See *Thomas v. McPherson Health Center*, 400 N.W.2d 629, 631 (Mich. Ct. App. 1986). But the majority assumes, without citation or authority, that *this* case is such a case.

In Michigan, expert testimony in professional negligence (and toxic tort) cases like this one is required to avoid summary judgment “unless the lack of professional care is so manifest that it would be within the common knowledge and experience of the ordinary layman that the conduct was careless . . . .” *Lince v. Monson*, 108 N.W.2d 845, 848 (Mich. 1961). The Michigan courts do not provide a test for what is common knowledge, but do require more than “a bad result,” *Jones v. Porretta*, 405 N.W. 863, 874 (Mich. 1981), and have frequently held that negligence cannot be inferred based on ordinary knowledge simply from an unexpected injury. See, e.g., *Woodard v. Custer*, 702 N.W. 2d 522, 525 (Mich. 2005) (“[W]hether a leg may be fractured in the absence of negligence when placing an arterial line . . . in a newborn’s leg is not within the common understanding of the jury . . . .”). This approach comports with the general view that injuries in professional negligence cases, especially those involving complex chemicals and human health, “are usually not immediately obvious and the connection between exposure and injury is not a matter of common sense or everyday experience.” *In re Meridia*, 328 F. Supp. 2d 791, 798 (N.D. Ohio 2004).

As I understand it, these cases require expert testimony in complex, professional, or scientific-based negligence cases in order to limit the dangers associated with indulging the *post hoc* impulse: it is too easy to charge an uncommon harm to the presence of a mysterious substance. Properly credentialed expert testimony operates as a bulwark against such fallacious attribution of guilt. As in the *Daubert* context, our concern in applying these cases should be to “assure that the powerful engine of tort liability . . . points towards the right substances and does not destroy the wrong ones.” *General Electric v. Joiner*, 522 U.S. 136, 148-49 (1997) (Breyer, J. concurring).

While our case is not a “professional care” case, in a very recent, albeit unpublished, decision, the Michigan Court of Appeals applied this wisdom to a case similar to ours. The court, citing favorably to the district court opinion in this case, held that without expert testimony directly connecting the level of pesticide exposure to the

plaintiff's mysterious illness, a plaintiff alleging pesticide poisoning could not get to the jury. *See Trice v. Oakland Development Ltd. Partnership*, 2008 Mich. App. LEXIS 2484 at \*30 (Mich. Ct. App. Dec. 16, 2008) (citing *Gass v. Marriott*, 501 F. Supp. 2d 1011, 1023 (W.D. Mich. 2007)). Specifically, "the dose of chemicals to which plaintiff had been exposed had not been determined," *id.* at \*32, and so "without evidence that plaintiff had been exposed to any chemicals at a level that would be harmful, plaintiff could not establish specific causation." *Id.* at \*35.

It is against this background that I disagree with the majority's conclusion that the plaintiffs' proof, without expert testimony, survives summary judgment.

### III

As a general matter, the weakness in the majority's reasoning is demonstrated by reference to the emotive language used to characterize the facts. The words assume negligence and, accordingly, make it easy to agree that a lay person could come to an informed conclusion about the case. For instance, the cloud of pesticide was "toxic or hazardous," Op. at 16, and it delivered a "high dose," Op. at 20, of chemical exposure because of defendants' "unacceptable behavior," Op. at 15. But one cannot know that these conclusions (that should be based on scientific facts of how a chemical impacts the human body and legal standards) are appropriate without an expert explaining *what amount* constitutes a high dose or *how much* exposure makes a chemical toxic to the human body. *Cf. Woodard*, 702 N.W.2d at 526-27. It is surely common experience that pesticides are poison, but that does not resolve the question at issue in this litigation: it may be that being exposed to a room "sort of cloudy" with Demand CS will cause no lasting effects if the exposure is five minutes but not ten; ten but not twenty.

The majority avoids the difficulty of scientific judgments by simply defining the exposure as a high dose and the defendants' behavior as unacceptable. Of course a jury can decide for a plaintiff if it is shown that because of a defendant's action a poisonously high dose of a pesticide was administered to the plaintiff. But a closer examination of the summary judgment record reveals that the evidence the plaintiffs have adduced does not establish anything close to that description of defendants' behavior and the

majority's holding is premised on a mistaken belief that a lay jury is competent to set the standard of care for the administration of pesticides and to determine the cause of a mystery illness.

### A

In reversing the district court's breach holding, the majority asserts that a "factfinder is able to weigh and evaluate the evidence based on his or her ordinary experience," Op. at 15, because the plaintiffs testimony established that the defendants' action resulted in a "thick, horrid, acrid, putrid" cloud of pesticides in the room. The "because" in the previous sentence, the effect of which is to make it unnecessary for the plaintiffs' to introduce expert testimony establishing a breach of duty, is not supported by law.

As to the danger of the chemicals (and presumably the duty of care), the evidence cited by the majority is the following: (1) the substance sprayed left the hotel room "sort of cloudy" and (2) the MSDS report for two of the substances possibly used demonstrates that exposure *may* result in certain symptoms. As to the defendants' behavior, the majority cites the following evidence: (1) men in masks entered the hotel room and sprayed pesticides despite the presence of suitcases and other indicia of occupancy and (2) defendants were aware that "some of the chemicals they routinely use could cause serious illness . . . ." Op. at 16.

This is underwhelming proof of defendants' alleged breach of a duty of care. The evidence leaves open more questions than it answers. We do not know how harmful the chemicals are or under what circumstances those harms obtain. For instance, how long do the symptoms persist? How much exposure triggers what symptoms? What measures (besides ventilation) can prevent harm? How many parts per million make a room "cloudy"? How much chemical concentration before a "sort of cloudy" room becomes dangerous? Similarly, the evidence is silent about defendants' behavior in relation to a standard of care. For instance, which chemical was sprayed? Is a hotel room "well ventilated"? Does the chemical effect dissipate? How fast? What is its

effect on articles in a room? How long does it last? Must a room be vacant to be sprayed?

As I understand Michigan's tort law, the gaps in the evidence suggested by these questions are too wide to be bridged by jury inference. To be sure, the difference between "common knowledge" and a fact that must be explained by expert testimony has not been precisely defined. But wherever the line may be, the questions posed in the previous paragraph about health effects and proper precautions to mitigate them appear to me well beyond the ordinary ken of a juror. *See Thomas*, 400 N.W.2d at 630 (upholding a directed verdict for the defendant where "[p]laintiffs provided expert testimony that [their proffered theories of liability] would constitute a breach of the appropriate standard of care" but "they did not produce evidence in the form of expert opinion that the health center had in fact breached the standard of care.>").

The majority makes no attempt to argue to the contrary based on the plaintiffs' evidence. They assert only that "[e]xpert testimony is not necessary to establish that such egregious behavior does not conform to the standard of care" because "an ordinary person understands that it is unacceptable to enter a place where another is residing and fill that place with airborne poison, without providing for evacuation of the inhabitants, appropriate ventilation, or taking other precautions." *Op.* at 15. This assertion fails for two reasons.

First, there is no evidence (lay or expert) to support the majority's premises about what the defendants did. There is no evidence as to which pesticide was used (that is, how poisonous the "airborne poison" actually was – on the plaintiffs' allegations, there are differences between Demand CS and Suspend SC); that it would linger long enough to seriously harm someone; that complete evacuation of all property in the room was necessary; that a modern hotel room is not appropriately ventilated; or that "other precautions" were necessary. The assertion thus fails on its own terms.

Second, it asserts without argument that the standard of care is common knowledge. This is unsupportable. Some pesticides can be used in a home by a private individual without supervision or extra preparation and some require the tenting and total

evacuation of the home. Simply reading the MSDS reports (whose warnings as to Suspend SC and Demand CS mirror the warnings on the can of over-the-counter Ant & Roach Killer in my chambers<sup>1</sup>) as the majority does cannot explain the difference. The majority may be correct that if the jury knew all that was required of the defendants under the appropriate level of care, it could compare the plaintiffs' version of events to that duty and make a breach determination. But that is not the case we have before us. In our case an expert is required to explain the potential hazards associated with certain pesticides and the best practices for avoiding those hazards.

## B

The majority's causation analysis is even less persuasive. It boils down to an assertion that there is evidence of causation because the defendants sprayed a pesticide, scientific evidence shows that one of the pesticides they *may* have sprayed causes certain physical symptoms, and the plaintiffs did in fact experience those symptoms. The missing premises from this argument – that defendants did spray the substance known to be dangerous, that the spray was in sufficient amount to cause harm, that plaintiffs' minutes-long exposure was sufficient to cause harm, that other causes can be excluded with confidence, etc. – are almost too many to list.

The majority holds that those premises can be supplied by inference. The opinion, however, makes no attempt to explain why the causal link between the defendants' actions and the plaintiffs' illnesses are within common experience. There is good reason to think that it is not. For instance, ordinary understanding of everyday medical problems does not include the proposition that black tongue is ordinarily caused by spraying of pesticides.<sup>2</sup> To be sure, an ordinary lay person probably begins with an

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<sup>1</sup> For example, compare the warning the majority cites for the proposition "mere skin contact with Demand CS is dangerous" at page 15 of the opinion with the over-the-counter warning regarding contact with skin or clothing: "Take off contaminated clothing. Rinse skin immediately . . . for 15-20 minutes. Call a poison control center or doctor for treatment advice."

<sup>2</sup> Indeed, publically available information suggests many other, more common, causes: (1) changes in the normal bacteria or yeast content of the mouth following antibiotic treatment; (2) poor oral hygiene; (3) medications containing bismuth, such as Pepto-Bismol; (4) regular use of mouthwash containing oxidizing agents; and (5) drinking excessive amounts of coffee or tea. *See* Alan Carr, *What Causes a Black Hairy Tongue?* Mayo Clinic: Ask a Dental Specialist, *available at*

assumption that black tongue is evidence of *something* gone wrong, but the question here is *what* that something is and whether it is chargeable to the defendants' actions. See *Thomas*, 400 N.W.2d at 631 (rejecting an argument similar to plaintiffs' because the "injury was susceptible to a number of explanations, all of which required medical knowledge to discern.").

The majority's reliance, at pages 20-21, on Dr. Natzke's statement that pesticide exposure *could* cause black tongue to show that the jury would possess the knowledge necessary to make a reliable attribution of fault is not persuasive. First, Dr. Natzke does not say that *the plaintiffs'* injuries are the result of pesticides or even that *these* pesticides could cause black tongue. Second, not only is there a lack of knowledge about how the condition comes about, reliance on Natzke's statement would permit lay people to make a determination about the cause of an unfamiliar medical condition based only on a *post hoc* temporal connection and an abstract statement of a risk of harm.

#### IV

We need to look no further than this case for an illustration of the concerns underlying my belief that these standard of care and causation issues require expert explanation. The flaws in the majority's reasoning – eliding the difficult scientific questions; conflating colloquial usage of terms like "toxic" and "high dose" with scientific conclusions about the health effects of the plaintiffs' exposure; and attributing causation on the basis of order of events – are the reasons lay people (jurors and judges alike) are advised to take expert guidance in drawing scientific conclusions. I believe our courts should require that guidance. I respectfully dissent.

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<http://www.mayoclinic.com/health/black-hairy-tongue/HQ00325>. Similarly, an OSHA document included by plaintiffs in the summary judgment record that describes their diagnosis of "Multiple Chemical Sensitivities" admits that "[t]here is insufficient scientific evidence to confirm a relationship between . . . possible causes and symptoms." J.A. 564.