HEADNOTE

***MONTGOMERY MUTUAL INSURANCE COMPANY v. JOSEPHINE CHESSON ET AL.*, NO. 1270, SEPTEMBER TERM, 2005**

***FRYE v. UNITED STATES*, 293 F. 1013 (D.C. CIR., 1923); *REED v. STATE*, 283 MD. 374 (1978); CSX *TRANSP., INC. v. MILLER*, 159 MD. APP. 123 (2004), *CERT. GRANTED*, 384 MD. 581 (2005), *CERT. DISMISSED*, 387 MD. 351 (2005); TRIAL COURT DID NOT ERR OR ABUSE ITS DISCRETION IN CONCLUDING THAT THE METHODOLOGIES EMPLOYED BY APPELLEES' EXPERT WITNESS, DR. SHOEMAKER, IN HIS DETERMINATION REGARDING CAUSATION DUE TO EXPOSURE TO MOLD WERE NOT NEW OR NOVEL SCIENTIFIC TECHNIQUES REQUIRING APPLICATION OF THE FRYE-REED TEST.**

REPORTED

IN THE COURT OF SPECIAL APPEALS

OF MARYLAND

No. 1270

September Term, 2005

MONTGOMERY MUTUAL INSURANCE COMPANY

v.

JOSEPHINE CHESSON ET AL.

Davis,
Eyler, James R.,
Sharer,

JJ.

Opinion by Davis, J.

Filed: September 20, 2006

Montgomery Mutual Insurance Company, appellant, appeals from a jury verdict in the Circuit Court for Howard County (Moylan, Daniel, J., presiding), in which the jury, finding accidental injury and causal relationship, reversed decisions of the Workers' Compensation Commission. The court had accepted and admitted the expert testimony and opinions of Ritchie Shoemaker, M.D. over appellant's objection. Appellant presents one question for our review, which we rephrase:

> Did the Circuit Court for Howard County err and abuse its discretion in finding that the Frye-Reed Doctrine did not apply to the testimony of Ritchie Shoemaker, M.D.?

We answer in the negative and shall therefore affirm.

FACTUAL BACKGROUND

Appellees Josephine Chesson, Martha Knight, Carole Silberhorn, Linda Gamble, Kenneth Lyons and Connie Collins were all employees of the Baltimore Washington Conference of the United Methodist Church (BWCUMC), located at 9720 Patuxent Woods Parkway, Columbia, Maryland in Howard County. Appellant notes that "[i]t is stipulated that on or about November 18, 2002 a foul odor" emanated throughout the building, which led to a "maintenance crew breaking through an interior wall." The crew discovered two forms of mold present in the building. Each appellee filed a claim with the Workers' Compensation Commission (the Commission) against BWCUMC and appellant, BWCUMC's insurance carrier for workers' compensation coverage, alleging that they each had sustained an accidental injury or occupational disease, known as sick building syndrome,

arising out of and in the course of their employment, due to the exposure to toxic mold in November of 2002. The Commission disallowed three of appellees' claims and awarded partial compensation to the remaining appellees based on the Commission's findings that those appellees sustained an accidental injury.

Subsequently, each appellee filed a petition for judicial review in the circuit court. Upon considering the parties' Joint Motion to Consolidate, the court consolidated the six petitions. Each appellee was examined and treated by Dr. Shoemaker, a licensed physician in the State since 1980 and board certified in the field of family medicine. Appellees sought to have Dr. Shoemaker testify on their behalf to discuss his examination methods and explain his diagnosis of appellees' affliction with sick building syndrome caused by their exposure to toxic mold.

Prior to trial in the circuit court, appellant filed a *Motion in Limine* to Exclude Testimony of Ritchie Shoemaker, M.D. Appellant argued that Dr. Shoemaker's testimony should be excluded because his "methodologies used for diagnosis, . . . [his] use of Cholestyramine for treatment of "neuro-toxic" illness . . . [and his] theories regarding the causal connection between mold exposure and human health effects" are not generally accepted by the scientific community. In addition, appellant urged that Dr. Shoemaker's opinion was based upon "new science" and was "unreliable." In response, appellees maintained that Dr. Shoemaker's testimony was admissible and that the Frye-Reed test

did not apply in this case because Dr. Shoemaker was offering his expert opinion as a general practitioner and treating physician for appellees.

After considering the parties' memoranda and hearing argument on July 6, 2005, the court rendered the following ruling from the bench:

> . . . I'm going to deny the *Motion in Limine* to exclude the testimony of Dr. Ritchie Shoemaker, and I have reviewed the entire submissions and responses, and the cases that you've cited, and also have reviewed, with interest, the deposition of Dr. Shoemaker, and I'm satisfied, from the evidence that, regardless of where he starts, that Dr. Shoemaker has people fill out a form, which is not an uncommon practice among physicians, or physician's offices, but -- he then goes on and he takes a history, and -- of the patients, and he physically examines them, and then does testing, and the particular tests that he uses are different various and sundry blood tests.
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> He was asked the question in his *voir dire* examination, whether he ever testified as an expert witness, before, in this area, relating to the diagnosis causation and treatment of bio toxic, and associated illnesses. And he said . . . that in Maryland, none of the cases had ever gone to trial, they'd always been settled, but he was qualified -- asked the question, "have you ever been qualified in any courts, and in any other states, and he said, yes; what states? In Delaware and Colorado." And he also indicated that he's spending, approximately, seventy-five percent of his professional time, now, dealing with bio toxic related illness.
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> His particular entry into this area, and notoriety, came with Physteria [sic] problem in Maryland, and I noted, in reviewing his deposition, that he had a particular interest in wetlands, and causal relationship with that regard.
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> But, we're talking about a board-certified physician, who has devoted, apparently, in the last five or six years, more than fifty percent of his time to this area of specialty, and I'm satisfied that this is not a

> Frye-Reed situation, it's "diagnosis by a medical practitioner, and he, while they have not adopted, or adapted his publications, and things that he has developed; he's published widely in his field, he's gone to law school, and consulted, and he's indicated he's worked with a number of other doctors in this area; I'm satisfied that he's qualified to render opinions in this area, and his opinions would be admissible in the things you mentioned that go to their weight, rather than their admissibility. So, I'm going to deny the *Motion in Limine*.[1]

Appellant's appeal to this Court followed.

LEGAL ANALYSIS

Appellant argues that the court erred and abused its discretion by accepting Dr. Shoemaker as an expert, admitting his testimony and opinion and not subjecting his testimony to a *Frye-Reed* analysis. Appellant contends that the court should have excluded Dr. Shoemaker's testimony "because the methodologies, techniques and tests used to formulate his opinions are novel scientific techniques that have no generally accepted scientific foundation." We disagree.

[1]After appellees' petitions proceeded to trial, the jury subsequently returned verdicts, all in favor of appellees, and found that they sustained accidental injury caused by exposure to mold.

I

Md. Rule 5-702 (2006), the Rule which governs testimony by experts, provides:

> Expert testimony may be admitted, in the form of an opinion or otherwise, if the court determines that the testimony will assist the trier of fact to understand the evidence or to determine a fact in issue. In making that determination, the court shall determine (1) whether the witness is qualified as an expert by knowledge, skill, experience, training, or education, (2) the appropriateness of the expert testimony on the particular subject, and (3) whether a sufficient factual basis exists to support the expert testimony.

With respect to an expert's qualifications and our standard of review, we reiterate that

> [i]t is a time-honored rule of evidence that in order to qualify as an expert, [one] should have such special knowledge of the subject on which he is to testify that he can give the jury assistance in solving a problem for which their equipment of average knowledge is inadequate. *Broad discretion is vested in the trial court with regard to expert testimony, and that discretion will not be disturbed on appeal absent an error of law or fact, a serious mistake, or clear abuse of discretion.* We further note that objections attacking an expert's training, expertise, or basis of knowledge go to the weight of the evidence and not its admissibility.

Johnson & Higgins of Pennsylvania, Inc. v. Hale Shipping Corp., 121 Md. App. 426, 444, *cert. denied*, Matter of Johnson & Higgins, 351 Md. 162 (1998)(citations and quotation marks omitted) (emphasis added).

Regarding scientific expert opinion, it is well-settled that "before a scientific opinion will be received as evidence at trial, the basis of that opinion must be shown to be generally accepted as reliable within the expert's particular scientific field." *Reed v.*

State, 283 Md. 374, 381 (1978). Therefore, pursuant to the standard enunciated in *Frye v. United States*, 293 F. 1013, 1014 (D.C. Cir. 1923),[2] "if a new scientific technique's validity is in controversy in the relevant scientific community, or if it is generally regarded as an experimental technique, then expert testimony based upon its validity cannot be admitted into evidence." *Reed*, 283 Md. at 381 (citing *Frye, supra*). In *Reed v. State*, *supra*, the Court of Appeals followed the *Frye* Court and adopted "the "general acceptance" rule, reasoning:

> As long as the scientific community remains significantly divided, results of controversial techniques will not be admitted, and all defendants will face the same burden. If, on the other hand, a novel scientific process does achieve general acceptance in the scientific community, there will likely be as little dispute over its reliability as there is now concerning other areas of forensic science which have been deemed admissible under the Frye standard, such as blood tests, ballistics tests, etc.

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[2]As the *Frye* Court observed:

> Just when a scientific principle of discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone the evidential force of the principle must be recognized, and while courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs.

Frye, 293 F. at 1014 (holding that "the systolic blood pressure deception test has not yet gained such standing and scientific recognition . . . as would justify the courts in admitting expert testimony deduced from the discovery, development, and experiments thus far made.").

> . . . The introduction of evidence based on a scientific process, not yet generally accepted in the scientific community, is likely to distract the fact finder from its central concern, namely the rendition of a judgment on the merits of the litigation. Without the Frye test or something similar, the reliability of an experimental scientific technique is likely to become a central issue in each trial in which it is introduced, as long as there remains serious disagreement in the scientific community over its reliability. Again and again, the examination and cross-examination of expert witnesses will be as protracted and time-consuming . . . and proceedings may well degenerate into trials of the technique itself.

Id. at 388.

The Court also expounded upon the relationship between a trial court's use of this standard and its exercise of discretion:

> Our adoption of the Frye standard does not, of course, disturb the traditional discretion of the trial judge with respect to the admissibility of expert testimony. Frye sets forth only a legal standard which governs the trial judge's determination of a threshold issue. Testimony based on a technique which is found to have gained "general acceptance in the scientific community" may be admitted into evidence, but only if a trial judge also determines in the exercise of his discretion, as he must in all other instances of expert testimony, that the proposed testimony will be helpful to the jury, that the expert is properly qualified, etc. Obviously, however, if a technique does not meet the Frye standard, a trial judge will have no occasion to reach these further issues.

Id. at 389 (citation omitted).

Applying the *Frye* standard, a majority of the Court held that testimony based on "voiceprints" or spectogram technique was inadmissible as "evidence of voice identification" because that

technology had not "achieved the general acceptance in the scientific community" at that time. *Id.* at 399.[3]

More recently, the Court of Appeals, in *Clemons v. State*, 392 Md. 339, 363-64 (2006), further explicating the procedure, sequentially, upon the offer of expert testimony based on novel techniques, penned:

> Writing for this Court in *Reed,* Judge Eldridge observed that prior to the admission of expert testimony based on the application of novel scientific techniques, the party seeking to use the expert testimony must establish that the particular methodology is valid and reliable. *Reed,* 283 Md. at 380, 391 A.2d at 367. As we noted in *Wilson,* through our discussion of the reasoning in *Reed,*
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> > Where the validity and reliability is so broadly and generally accepted within the scientific community, as is the case of ballistic tests, blood tests, and the like, a trial court may take judicial notice of its reliability. Likewise, a court may take judicial notice that certain procedures, widely recognized as bogus or experimental, are unreliable. When the reliability of a particular technique is not subject to judicial notice, however, 'it is necessary that the reliability be demonstrated before testimony based on the technique can be introduced into evidence. Although this demonstration will normally include testimony by witnesses, a court can and should take notice of law journal articles, articles from reliable sources that appear in scientific journals, and other publications which bear on the degree of acceptance by recognized experts that a particular process has achieved.' The Court concluded that the proper test for establishing the reliability of scientific

[3]The Court noted, nevertheless, that its holding was "subject to reconsideration . . . if the use of spectograms or some other technique of voice identification does in the future achieve the general acceptance of the scientific and legal communities." *Id.* at 399-400.

> opinion is whether the basis of that opinion is generally accepted as reliable within the expert's particular scientific field.

Wilson, 370 Md. at 201, 803 A.2d at 1039-40 (citations omitted). If the trial court determines that the test is admissible, on appellate review, this Court must independently apply the *Frye-Reed* test to the scientific techniques at issue. *See Wilson,* 370 Md. at 201 n. 5, 803 A.2d at 1040 n. 5; *Reed,* 283 Md. at 399, 391 A.2d at 377 ("Thus, based on our examination of the record in the instant case, the judicial opinions which have considered this question, and the available legal and scientific commentaries, we do not believe that "voiceprint" analysis has achieved the general acceptance in the scientific community, at this time, which is required under *Frye*").

II

Because of the nature of the proffered scientific evidence in this case, we reject appellant's contention that the court erred or abused its discretion by not applying the *Frye-Reed* test to the testimony of Dr. Shoemaker. After appellees' counsel completed *voir dire* examination of Dr. Shoemaker at deposition, counsel sought to offer him as 1) "an expert in the field of medicine" as a board certified family practitioner," 2) "as an expert in the field of biotoxin-related illnesses including the diagnosis and treatment thereof" and 3) "to express opinions concerning the causal relationship between exposure to biotoxins and illnesses. . . ." For the *Frye-Reed* test to be applicable to the case *sub judice*, the court would have had to initially determine whether the methodologies employed by Dr. Shoemaker, which served

as the foundation for his opinions and conclusions regarding causation and exposure to mold, are new or novel scientific techniques that have also been generally accepted by the pertinent scientific community as reliable. We hold that the court properly found that this case did not present a "Frye-Reed situation."

The court based its decision, in part, on Dr. Shoemaker's deposition, in which Dr. Shoemaker described his experience and delineated his methodology and practices:

> [Appellees' Counsel]: In addition to your board certification in family practice, have there been any other areas or specialties within the field of medicine that you've pursued since your graduation from medical school and your licensure in the State of Maryland?
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> [Dr. Shoemaker]: I've been very interested in illnesses caused by exposure to biologically-produced neurotoxins since 1997. This is not a formal specialty, but if someone were to ask me what do I do in most of my family practice, it would be, I diagnose and treat patients with biotoxin-associated illnesses.
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> [Appellees' Counsel]: Doctor, could you tell us -- you indicated that you began this interest in 1997. Could you tell us the circumstances under which you began this interest and what experience you've had in this area since this time?

[Dr. Shoemaker]: Yes. Beginning in 1980, I was very pleased to be a rural primary care physician in the small town of Pocomoke. . . . [T]here's a lot of beautiful wetlands, and that changed to a certain extent in 1997 and -- actually '96. We started hearing reports of some people finding fish with unusual lesions on them in the Pocomoke River followed by some stories of watermen, those that would contact these fish and harvest them, having unusual illnesses. There was some discussion about the possibility that an organism that's been killing fish for years in North Carolina was now growing in the Pocomoke River.

And indeed, in May of 1997, Pfiesteria was isolated from the Pocomoke River. Over the next several months I had the chance to see patients with a very unusual grouping of symptoms. These are multiple symptoms from multiple systems who came to me in part because I was their family doctor, in part because they knew of my interest in wetlands. Specifically no one had ever seen this grouping of illnesses. I never had before.

And the symptoms were devastating. Cognitive issues to the point that people would lose excessive cognitive functions of memory and concentration and confusion and word finding. Gastrointestinal symptoms of diarrhea and cramping, musculoskeletal symptoms of joint aches and muscle aches and muscle cramping. Respiratory problems of cough, shortness of breath, asthma like syndromes that didn't respond to asthma medications. Fatigue

certainly was dominant in this group of symptoms.

One person -- actually, my third one, a patient in July 1997 had a terrible kind of diarrhea, we call it a secretory diarrhea. It means that you remove your bowels whether you've eaten or not. And she had been to see other doctors, and they had given her antibiotics and Pepto-Bismol, and this and that. Nothing had worked, and, quite frankly, out of desperation, because she was becoming dehydrated, I gave her an old-fashioned cholesterol drug called Cholestyramine.

. . . It is FDA approved to lower cholesterol, and we used to use it a lot to lower cholesterol. But what it will do is bind a whole variety of organic and inorganic molecules. And Cholestyramine happens to bind biosalts and stops secretory diarrhea.

I gave her . . . the Cholestyramine and not surprised that her diarrhea stopped, but what surprised me was that her headaches stopped, her cough stopped and her memory returned. To me that was very unusual. I started, therefore, giving [Cholestyramine] to other patients with Pfiesteria illness and almost magically these patients started improving rapidly.

[Appellees' Counsel]: Let me just stop you for one moment, Doctor. What exactly was Pfiesteria or is Pfiesteria?

[Dr. Shoemaker]: Pfiesteria is an organism like an algae, we call it a dinoflagellate. It's actually one of those primitive organisms on earth. This Pfiesteria is one of the types that lives in estuaries, and it has a variety of phases one of which is a moveable, or motile, phase in which it'll be in the water column. In that motile phase if there is presentation of fish and the possibility of breeding, Pfiesteria will release a molecule or a suite of molecules that are called toxins, or biologically-produced toxins, and they are neurotoxins that kind of narcotize and immobolize the fish eventually leaving it prone to lesions on the fish. That is a -- what we call a pheromone, or it's an attractant, and other Pfiesteria organisms will come to the same site, they feed and breed. . . .

[Appellees' Counsel]: Over what period of time did you treat individuals who had contracted disease from Pfiesteria?

[Dr. Shoemaker]: I started treating them in the fall of '97. . . .

The number of cases of Pfiesteria illness syndrome were such that there's a tremendous amount of publicity, or perhaps because of the Baltimore Sun and Washington Post interest, and there was a team of academic physicians appointed by the Governor, in a way, to come down and verify that what I said was actually happening. And I think there was some discussion that perhaps these people just had a preexisting condition, that they had asthma or allergy or depression or stress and nothing was wrong with them at all. Fortunately, the team

of researches [sic] was unbiased and recognized the distinctive pattern of illnesses in a special clinic that I had written about, and that then set off a significant investigation of human health problems with Pfiesteria culminating with a case definition made for a Pfiesteria patient by the Centers for Disease Control and Prevention. It's interesting that that case definition has wide use in my work with other biological toxin illnesses to this day.

[Appellees' Counsel]: In addition to your treatment of patients who become ill through Pfiesteria generated by biotoxins, have you also done work with other patients who have become ill from biotoxins from other sources?

[Dr. Shoemaker]: Yes. In the dinoflagellate group, more common than Pfiesteria is an illness called ciguatera that you can get from eating particular kinds of food, fishes from reefs, for example.

We had a problem with a different dinoflagellate, a shatinella in the Ocean Pines area in 2001. It was because of that work that led me to Florida in 1998 to -- at the request of Florida physicians to look at illnesses associated with growth of toxin forming blue green algae in some of the lakes of Florida. The same grouping of symptoms was present. The same response to Cholestyramine was present in those.

Later in 1998, I saw my first patient who had an illness with the

typical symptoms, typical findings that I had seen in other biotoxin formers, but had no exposure to estuaries and no exposures to dinoflagellates or lakes of Florida. And that exposure was only to . . . a residence with water intrusion and mold growth.

Not knowing what were the mechanics and the physiology of the illness, that I simply gave that patient Cholestyramine, again, with essentially complete resolution of symptoms once again. . . .

[Appellees' Counsel]: You indicated that this was in 1998, this was the first patient that you treated where you suspected that the biotoxin ill -- biotoxin-associated illness was from mold; is that right?

[Dr. Shoemaker]: That's the first patient, yes.

[Appellees' Counsel]: Subsequent to that time, did you do any additional research or have any additional experience with patients who had become ill from exposure to biotoxins produced by mold?

[Dr. Shoemaker]: Yes. Since 1998, I've diagnosed and treated over 2,500 patients with this illness. My practice now is mostly a referral practice. Seventy-five to 90 percent of my patients come from more than a hundred miles away primarily because I can show clear evidence of what the illness is, let patients see it on a piece of paper, and then our track record on treatments of these

patients remains the single biggest source of referral.

The reality for me is that we still cannot tell which toxin made by organisms in water damaged buildings make patients sick, and our ongoing research is looking towards that end.

But specifically, we now are able to show, through the process of science, a repetitive exposure protocol, that we call ABAB, that we can take people that are ill, treat them and make them better, stop drug and then let them go wherever they want, they then will be exposed to the ubiquitous fungi of the world, the ones that in this room, the ones that might be in your car, and they don't get sick.

We then document changes in a variety of markers for the illness showing they're staying exactly the same. We put them back in the building of known contamination and watch them get sick in three days.

What we do now is sequential blood tests and, again, an investigation of markers in these patients on day one, day two, day three, so we can show changes in particular innate immune responses beginning in four hours. . . .

So the point is, what we did back in Pfiesteria was simply diagnose on the basis of a case definition that included documentation of exposure, presence of symptoms and absence of logically -- biologically plausible

confounders. We did not have any tests, any other mechanism at that time to diagnose and treat.

[Appellees' Counsel]: Despite that -- those limitations, were you able in those cases involving Pfiesteria to arrive at opinions based upon a reasonable medical probability as to cause and effect and of -- between the Pfiesteria toxins and the illnesses sustained by these individuals?

[Dr. Shoemaker]: Yes. As a follow-up to the two papers that I published in Maryland Medical Journal, we had two papers, we being Dr. Ken Hudnell, who's a neurotoxicologist from USEPA, we published a grand rounds in environmental medicine in Environmental Health Perspectives in 2001, and then followed up with another paper in a CDC Pfiesteria issue of Environmental Health Perspective in the fall of 2001. We still didn't have the full array of biomarkers that we have now. What we had was clinical judgment, clinical experience and successful therapy.

[Appellees' Counsel]: What has -- the development of these additional -- these additional tests, the blood tests from which you determined these markers, as I believe you've referred to them, and also there's another test called a visual contrast test also; is that correct?

[Dr. Shoemaker]: Yes. Dr. Hudnell was the first to show the presence of a reproducibly reliable neurologic test of visual

contrast in a cohort of Pfiesteria patients. That was in July of 1998.

[Appellees' Counsel]: And let me just ask you. What other laboratory tests or what other scientific tests are you presently using to diagnose biotoxin-associated illnesses?

[Dr. Shoemaker]: What I have done is go to medical literature and identify large numbers of peer reviewed articles that deal with abnormalities in innate immune responses, particular immune response genes, particular antigen presentation. We look at melanocyte simulating hormone which is made by part of the brain called the hypothalamus. That's a regulatory hormone. We look at pitutary [sic] hormone abnormalities induced by changes in MSH. We look at particular vascular growth factors, vascular endothelial growth factors the one most common. We look at compliment, as I've mentioned in some detail. We look at a variety of autoimmune antibody studies. The list of applications of the peer reviewed basic science to what I call mold illness is quite large. None of these applications come out of thin air. They all come from basic science published.

[Appellees' Counsel]: What effect has your ability now to use these tests had on the degree of certainty to which you can express opinions concerning the cause and effect between neurotoxins and the illnesses which these individuals suffer -- or biotoxins I think is probably the right word?

[Dr. Shoemaker]: When all we had were symptoms, exposure and response to therapy, we certainly had reasonable medical certainty more likely than not. With the lab tests, we can achieve well over 90 percent probability. With repetitive exposure protocol, we can obtain close to 100 percent likelihood. . . .[4]

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[4]Appellant refers us to *Giant Food, Inc. v. Booker*, 152 Md. App. 166, *cert. denied*, 378 Md. 614 (2003), and argues that Dr. Shoemaker's testimony should have been excluded because the expert in that case lacked a factual basis in part due to his failure to explore alternative causes. We point to Dr. Shoemaker's testimony concerning his evaluating alternative environmental factors that could have caused the illness experienced by his patients:

[Appellees' Counsel]: Okay. In connection with your diagnosis of patients with biotoxin-related illnesses, do you make an attempt to arrive at a differential diagnosis or to rule out causes other than biotoxins?

[Dr. Shoemaker]: The third element of the first tier, which I mentioned to you previously, does involve differential diagnosis. And specifically what we have to show that they're no biologically plausible alternative explanations for the group of symptoms and indeed laboratory abnormalities our patients have. Fortunately, the labs that I use are readily available from commercial laboratories, and we are able to accumulate a database that will rule out confounders very, very quickly.

[Appellees' Counsel]: And just for the record, a confounder is what, Doctor?

[Dr. Shoemaker]: That would be an alternative logical explanation.

[Appellees' Counsel]: Okay. What -- in the context of biotoxin-associated illnesses, what types of symptoms are you likely to see?

[Dr. Shoemaker]: The requirement is that patients have multiple symptoms. The requirement is that these multiple symptoms will come from multiple body systems. The average number, for example, for adult patients with mold illness is right around 20. The average number for children under the age of 18 is just over 12. This is from a list of 37 symptoms that I will ask for in a medical history.

[Appellees' Counsel]: . . . I think you indicated you treated approximately 2,500 patients with biotoxin-related illnesses; is that right?

[Dr. Shoemaker]: No. It's 2,500 plus for mold. It's a little over 4,000 for the whole spectrum.

[Appellees' Counsel]: All right. And those are the -- on your curriculum vitae, you list health investigations and treatment cohorts of patients exposed to toxigenic fungi more than four patients. What does that refer to?

[Dr. Shoemaker]: I've been asked to do a number of building reviews to try to assess who is potentially ill from exposure to buildings. It's a little different than someone coming to me for treatment for illness here in my office.

[Appellees' Counsel]: . . . Approximately what percentage of your practice presently is relating -- relates to this biotoxin-related illness?

[Dr. Shoemaker]: Approximately 75 percent of my time.

Appellant argues that its experts and another expert who testified for appellees use methodologies and engage in medical practices that are generally accepted in the medical field when examining patients who may have been exposed to toxic mold. Appellant urges in its brief:

> The generally accepted method of diagnosing illness from exposure to mold, according to one of the insurer's experts, Dr. Cheung and Dr. Parkerson, as well as according to one of the claimants' experts, Dr. Bernstein is to interview the patient, examine the patient, and perform allergy testing and spirometry (airway) testing. Then the doctor attempts to rule out environmental causes, other than the building in which the mold was found. He or she also attempts to rule out other illnesses or conditions that cause similar symptoms through, for example, review of prior medical treatment records. Upon completion of the evaluation of the patient through history, testing and diagnostic analysis, a diagnosis is then provided and causal relationship can be addressed.

In reviewing and comparing the methodologies, it is evident that Dr. Shoemaker employs different tests and strategies to treat the medical conditions of his patients, in general and, appellees, in particular. We agree with the court, however, that there are certain tests that Dr. Shoemaker performs that are not so unorthodox that would warrant subjecting them to a *Frye-Reed*

analysis; *e.g.*, patients fill out forms concerning medical history, the doctor runs several blood tests and performs physical examinations. Dr. Shoemaker's testimony also revealed that he possesses extensive experience in treating individuals with illnesses caused by exposure to toxins, noting his diagnosis and treatment of thousands of such patients during a period of approximately ten years, and how he now devotes at least seventy-five percent of "his professional time . . . dealing with bio toxic related illness." As previously noted, "[t]he logical corollary of the *Frye* test's focus on methodology rather than conclusions is that even unpopular conclusions are admissible so long as they are based upon generally accepted methodologies."[5] *Giddens v. State*, 148 Md. App. 407, 417 (2002), *cert. denied*, 374

[5]In its brief, appellant cites *Giddens* where we held that an expert's autopsy finding and subsequent conclusion offered at trial was not subject to the *Frye-Reed* test where the expert's opinion, despite it being "controversial and/or unpopular" was based upon methodology generally accepted by other experts. *Giddens*, 148 Md. App. at 418. Appellant argues that Dr. Shoemaker's testimony should have been excluded because there was "no evidence that any other expert . . . would reasonably rely upon Dr. Shoemaker's methods to form their own opinions on causal relationship of human health effects to mold." Dr. Shoemaker's testimony, nevertheless, demonstrates his working with other physicians and researchers, whether it was investigating illnesses, presenting papers and clinics, or authoring articles for various journals pertaining to biotoxins and the effects on individuals exposed to them. In addition, Dr. Shoemaker also testified to receiving numerous referrals of patients from around the country to treat affected individuals. Based upon these facts, the court properly concluded that there are other physicians and experts within his field that would agree and reasonably rely on Dr. Shoemaker's methods to reach a conclusion regarding toxic mold and causation. As such, appellant's proposition fails.

Md. 83 (2003)(quoting *Kuhn v. Sandoz Pharm. Corp.*, 14 P.3d 1170, 1183 (Kan. 2000)).

As in the case *sub judice*, we have previously held that expert opinions concerning the cause or origin of an individual's condition are not subject to *Frye-Reed* analysis. In *Myers v. Celotex Corp.*, 88 Md. App. 442, 460 (1991), *cert. denied*, *Fibreboard Corp. v. Myers*, 325 Md. 249 (1992), we reversed the trial court's exclusion of appellant's expert causation opinion regarding asbestos exposure and cancer. In distinguishing the facts of *Myers* from a case that would invoke a *Frye-Reed* analysis, we explained that the fact that "exposure to asbestos may cause cancer . . . is not a novel or controversial assertion, nor is it a conclusion personal to Dr. Schepers." *Id.* at 458. We also stressed that the *Reed* holding had "not been extended to medical opinion evidence which [was] not presented as a scientific test [,] the results of which were controlled by inexorable, physical laws." *Id.* at 458-59 (citation and quotation marks omitted). Furthermore, noting that appellee had contended that Dr. Schepers' electrical charge theory that influenced his opinion would have required the jury to speculate about causation in that case, we nevertheless concluded that the jury's responsibility would have been to simply assess his credibility when it weighed his professional opinion, "even if the majority of his professional colleagues disagreed with it." *Id.* at 459-60.

We revisited *Myers* in the case of *CSX Transp., Inc. v. Miller*, 159 Md. App. 123 (2004), *cert. granted*, 384 Md. 581 (2005), *cert. dismissed*, 387 Md. 351 (2005), in which we affirmed the trial court's acceptance of expert medical opinion testimony. Referring to our opinion in *Myers*, Judge Moylan reiterated:

> A doctor's opinion as to the etiology of his patient's arthritis is simply not the type of thing contemplated by the phrase "new and novel scientific technique [required by the *Frye-Reed* test]." What is contemplated are new, and arguably questionable, techniques such as lie detector tests, breathalyzer tests, paraffin tests, DNA identification, voiceprint identification, as in the *Reed* case itself, and the use of polarized light microscopy to identify asbestos fibers. . . .

Id. at 187.

In the case at hand, Dr. Shoemaker did not discuss allergy or airway testing, but instead explained his use of visual contrast tests, an idea suggested by another physician; he also described his administration of a drug commonly prescribed to combat high cholesterol levels.[6] In addition to these practices, he also

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[6]Appellant cites *Goldstein v. State,* 339 Md. 563, 576 (1995), for the proposition that opinions based upon techniques that are not generally accepted are inadmissible. As the court explained and we noted above, however, Dr. Shoemaker's opinion as to appellees' exposure to mold causing their illnesses was based upon some generally accepted methods. An expert medical opinion, to a reasonable degree of medical probability, as we articulated in *Myers*, consisted of Dr. Schepers' "personal observations and professional experience." *Myers*, 88 Md. App. at 458. We also noted that an "expert's opinion need not be generally accepted in the scientific community before it can be sufficiently reliable and probative to support a jury finding." *Id.* (quoting *Osburn v. Anchor Labs., Inc.,* 825 F.2d 908, 915 (5th Cir. 1987), *cert.* (continued...)

stated that he had published several articles and conducted presentations with colleagues who specialize in illnesses caused by exposure to toxins. It is clear from Dr. Shoemaker's testimony that these practices have garnered acceptance among peers in this field, which would serve as support for the court's acceptance of him as an expert and bolster the conclusion that he could render opinions as to the cause of the illnesses sustained by appellees. As noted above, Dr. Shoemaker's opinion was based, in part, upon generally accepted practices, *i.e.*, medical examinations, patient history, blood tests. As a result, the court concluded that Dr. Shoemaker was qualified to "render opinions in this area" and that his opinions would be admissible to go to the weight of the claims. Significantly, as we noted in *Myers*, the finder of fact would have been free to discredit Dr. Shoemaker's testimony in light of the testimony of other experts regarding their different methods and opposing views. The fact that there were opposing viewpoints based upon other generally accepted methodologies, however, does not lead

[6](...continued)
denied, 485 U.S. 1009 (1988)). The court properly concluded that Dr. Shoemaker's personal observations of appellees and his extensive professional experience in this field was sufficient in admitting his expert testimony and opinion.

to the conclusion that Dr. Shoemaker's testimony should have been excluded.

JUDGMENT OF THE CIRCUIT COURT FOR HOWARD COUNTY AFFIRMED.

COSTS TO BE PAID BY APPELLANT.