

IN THE UNITED STATES COURT OF APPEALS  
FOR THE FIFTH CIRCUIT

United States Court of Appeals  
Fifth Circuit

**FILED**

January 13, 2009

Charles R. Fulbruge III  
Clerk

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No. 08-60085  
\_\_\_\_\_

GEORGE PAZ ET AL.

Plaintiffs

v.

BRUSH ENGINEERED MATERIALS INC ET AL.

Defendants

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JOSEPH P. HARRIS ET AL.

Plaintiffs - Appellants

v.

BRUSH WELLMAN INC. ET AL.

Defendants - Appellees

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Appeal from the United States District Court  
for the Southern District of Mississippi  
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Before JONES, Chief Judge, JOLLY, Circuit Judge, and MONTALVO, District  
Judge.\*

FRANK MONTALVO, District Judge:

In this negligence, product liability, and breach of warranty case, Joseph

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\* United States District Judge, Western District of Texas, sitting by designation.

Harris ("Harris"), Terry Lemon ("Lemon"), Marlin Moran ("Moran"), Rodney Sorapuru ("Sorapuru"), and Alvin Pittman, Sr. ("Pittman") (collectively, "employees") alleged Brush Wellman Inc.'s ("Brush") beryllium-containing products, which Brush sold to The Boeing Company ("Boeing") to use at the Stennis Space Center, in Stennis, Mississippi, caused the employees personal injuries, including beryllium sensitization ("BeS") and chronic beryllium disease ("CBD").<sup>1</sup> Margaret Ann Harris, Judith A. Lemon, and Hermelinda Sorapuru alleged derivative claims for loss of consortium as a result of the alleged injuries to their husbands. The district court excluded certain evidence presented by the employees because of its unreliability pursuant to Daubert<sup>2</sup> and the employees' violation of the district court's discovery order. The district court found none of the employees presented a compensable injury pursuant to Mississippi law and dismissed their claims and the derivative claims of their wives. We agree.

## BACKGROUND

The employees sued to recover compensatory and punitive damages for alleged personal injuries suffered as a result of exposure to beryllium-containing products at the Stennis Space Center. They contend exposure to beryllium-containing products have resulted in injuries, which include CBD and BeS. On November 17, 2004, the district court consolidated this matter with Paz v. Brush Engineered Materials, Inc., No. 1:04-CV-597-GuRo, in which the plaintiffs alleged a medical monitoring cause of action against Brush and Boeing.

Brush and Boeing jointly moved for dismissal on the medical monitoring cause of action, which the district court granted. Paz v. Brush Engineered

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<sup>1</sup> CBD is a disease that erodes the lungs and may result in death by suffocation.

<sup>2</sup> Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 113 S. Ct. 2786, 125 L. Ed. 2d 469 (1993) (setting forth the multi-factor test to determine the reliability of an expert).

Materials, Inc., 351 F. Supp. 2d 580, 586-87 (S.D. Miss. 2005) ("Paz I"). The Paz plaintiffs appealed to this court, which certified the question to the Mississippi Supreme Court of whether Mississippi law recognized a cause of action for medical monitoring without proof of physical injury. Paz v. Brush Engineered Materials, Inc., 445 F.3d 809, 815 (5th Cir. 2006) ("Paz II"). The Mississippi Supreme Court answered "[c]reating a medical monitoring action would be contrary to Mississippi common law, which does not allow recovery for negligence without showing an identifiable injury, and, further, strongly indicates that a claim for medical monitoring, as Plaintiffs present it, lacks an injury." Paz v. Brush Engineered Materials, Inc., 949 So. 2d 1, 3 (Miss. 2007) ("Paz III"). This court concluded the Paz case was controlled by the Mississippi Supreme Court's holding in Paz III, and accordingly affirmed the district court's decision. Paz v. Brush Engineered Materials, Inc., 483 F.3d 383 (5th Cir. 2007).

On September 6, 2005, Brush moved for summary judgment on the employees' remaining claims, arguing the employees failed to allege a compensable injury pursuant to Mississippi law. Boeing joined in Brush's summary judgment motion.<sup>3</sup> In August 2006, eight months after Brush filed for summary judgment, the employees filed a supplemental opposition to the summary judgment motion, claiming Dr. Lisa Maier ("Dr. Maier"), an expert in the field of CBD and BeS, diagnosed Pittman with CBD, in consultation with Dr. Jerrold Abraham ("Dr. Abraham"), and submitting Dr. Maier's testimony and report as evidence. Brush sought discovery on the diagnosis.

The district court entered a discovery order on October 16, 2006, directing the employees to provide Brush with slides and samples related to Pittman's biopsy by November 14, 2006, and permitting Brush to depose Drs. Maier and

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<sup>3</sup> Hereinafter, Brush and Boeing collectively will be referred to as "Brush."

Abraham. Contrary to this order, the employees did not produce slides or samples related to Pittman's biopsy until May 2007. On April 20, 2007, after Brush had deposed Drs. Maier and Abraham, Brush moved the district court to exclude Dr. Maier's testimony and report regarding Pittman's diagnosis. On June 8, 2007, Brush moved the district court to exclude two slides of Pittman's biopsy because the employees failed to produce the slides in accordance with the October 16, 2006, discovery order.

In its October 30, 2007, Order and Reasons, the district court, relying on Daubert, found Dr. Maier's testimony and report unreliable and excluded them. Based on its Rule 37 discretion and the slides' unreliability, the district court excluded the two slides. The district court concluded the Mississippi Supreme Court would find BeS is not a compensable injury as a matter of law.

The district court granted summary judgment on Harris', Pittman's, Lemon's, Sorapuru's, and the wives' claims. It found, however, there was a dispute of material fact regarding whether Moran had CBD and denied summary judgment on Moran's claim. On November 2, 2007, the employees moved the district court to reconsider its entire October 30, 2007, Order and Reasons, which the district court denied in its entirety on November 27, 2007. On November 6, 2007, Brush moved the district court to reconsider its denial of summary judgment on Moran's claim, which the district court granted.

The district court entered a final judgment, and the employees have appealed. On appeal, the employees contend the district court erred in (1) excluding Dr. Maier's expert testimony and report; (2) excluding two additional slides from evidence; (3) finding BeS is not a compensable injury pursuant to Mississippi law; and (4) finding Moran did not have CBD.

DISCUSSION

A. Exclusion of Expert Testimony and Report and Evidentiary Slides

1. Standard of Review

"This court reviews a district court's decision to admit or exclude evidence for abuse of discretion." *Compaq Computer Corp. v. Ergonome Inc.*, 387 F.3d 403, 408 (5th Cir. 2004) (citation omitted). "A trial court abuses its discretion when its ruling is based on an erroneous view of the law or a clearly erroneous assessment of the evidence." *Knight v. Kirby Inland Marine Inc.*, 482 F.3d 347, 351 (5th Cir. 2007) (quoting *Bocanegra v. Vicmar Servs., Inc.*, 320 F.3d 581, 584 (5th Cir.2003)).

2. The Exclusion of Dr. Maier's Testimony and Report Regarding Pittman's Diagnosis

The admissibility of evidence "is governed by the same rules, whether at trial or on summary judgment." *First United Fin. Corp. v. U.S. Fid. & Guar. Co.*, 96 F.3d 135, 136-37 (5th Cir. 1996). The proponent of an expert's testimony need not prove the testimony is factually correct, but rather need only prove by a preponderance of the evidence the testimony is reliable. *Moore v. Ashland Chem. Inc.*, 151 F.3d 269, 276 (5th Cir. 1998) (citations omitted). The Supreme Court set out the standard of reliability of expert testimony in *Daubert*, 509 U.S. 579, 113 S. Ct. 2786.

"The subject of an expert's testimony must be 'scientific . . . knowledge.'" *Id.* at 589-90 (notation omitted). The testimony must be "ground[ed] in the methods and procedures of science" and "more than subjective belief or unsupported speculation." *Id.* at 590. This is not to say it "must be 'known' to a certainty; arguably, there are no certainties in science." *Id.* (citation omitted).

"[I]n order to qualify as 'scientific knowledge,' an inference or assertion must be derived by the scientific method." *Id.*

Pursuant to *Daubert*, the district court may consider

whether the theory or technique the expert employs is generally accepted; whether the theory has been subjected to peer review and publication; whether the theory can and has been tested; whether the known or potential rate of error is acceptable; and whether there are standards controlling the technique's operation.

*Knight*, 482 F.3d at 351 (citation omitted). Where an expert relies on sound scientific methodology, "lack of textual support may 'go to the weight, not the admissibility' of the expert's testimony." *Id.* at 354 (citation omitted). "[A]ny step that renders the analysis unreliable . . . renders the expert testimony inadmissible." *Curtis v. M&S Petroleum, Inc.*, 174 F.3d 661, 670-71 (5th Cir. 1999) (citation omitted). Where an expert's opinion is based on insufficient information, the analysis is unreliable. See *id.* at 671.

After the district court considers the *Daubert* factors "the [District C]ourt then can consider whether other factors . . . are relevant to the case at hand." *Black v. Food Lion, Inc.*, 171 F.3d 308, 312 (5th Cir. 1999). The district court has the discretion to exclude evidence if it has not been properly authenticated. *R.R. Mgmt. Co. v. CFS La. Midstream Co.*, 428 F.3d 214, 220 (5th Cir. 2005).

The district court found Dr. Maier's March 22, 2006, evaluation of Pittman's lung biopsy identified no interstitial or bronchial wall granulomas, but that further evaluation based on the presence of multi-nucleated giant cells on biopsy was warranted. The district court determined Dr. Maier sent four of Pittman's pathology slides and one of his tissue blocks to Dr. Abraham, who examined the slides and reported on June 15, 2006, that lung tissues in the block revealed small granulomas. The district court found Dr. Maier assumed Dr.

Abraham made additional cuts of the biopsy for his evaluation, and based on those additional cuts, Dr. Maier concluded Pittman had CBD, without additional evaluation.

The district court concluded Dr. Maier's testimony and diagnosis, as it related to Pittman, should be excluded because it was unreliable pursuant to Daubert. The district court found Dr. Maier's diagnosis of Pittman to be unreliable because she had based it on a false assumption. She assumed Dr. Abraham made additional cuts, upon which he noted granulomas, whereas Dr. Abraham's testimony confirmed he made no additional cuts. The district court found Dr. Maier had not made her own independent evaluation of Dr. Abraham's findings, but rather based her diagnosis on Dr. Abraham's report, which he later was unable to substantiate. The district court determined Dr. Maier's testimony and report were based on insufficient, erroneous information, and excluded them as unreliable evidence.

Alternatively the district court found Dr. Maier's diagnosis of Pittman as having CBD based only on the presence of multi-nucleated giant cells, without any indication of granulomas or mononuclear cellular interstitial infiltrates, was also unreliable under Daubert. The district court found the employees' proffer of articles, which stated a diagnosis of CBD could be based on the presence of multi-nucleated giant cells found in combination with either or both granulomas and mononuclear cell interstitial infiltrates, was unavailing because none of the articles supported a diagnosis of CBD on the basis of multi-nucleated giant cells alone. The district court found Dr. Maier's assertion that the presence of multi-nucleated giant cells alone could lead to a diagnosis of CBD failed to satisfy the Daubert standard because the basis of such a diagnosis had not been tested or subjected to peer review or publication, and otherwise was not generally

accepted in the medical community, and her "mere assurances" her methodology for diagnosis was "generally accepted" in the scientific community was insufficient to render her testimony and report reliable pursuant to Daubert.

The district court's decision to exclude Dr. Maier's report and testimony was not an abuse of discretion. The record demonstrated Dr. Maier sought Dr. Abraham's assistance in reviewing Pittman's biopsy. Dr. Abraham acknowledged receiving only four slides from Dr. Maier. The record indicated Dr. Abraham's report to Dr. Maier noted "small granulomas" and no significant foreign material. The record revealed Dr. Abraham could not remember making additional slides or cuts and could not recall noting "small granulomas" on the four slides he did receive. The record supported the contention that Dr. Maier relied upon Dr. Abraham's finding of granulomas on biopsy. The record demonstrated Dr. Maier believed Dr. Abraham had made an evaluation of "additional lung tissue," which "did reveal small granulomas." The record showed Dr. Abraham made no such slides. Dr. Maier admitted in her own deposition testimony she was unaware of whether Dr. Abraham made additional cuts and slides, but still believed Dr. Abraham's report was correct.

The district court did not abuse its discretion in finding Dr. Maier's report and testimony of Pittman's diagnosis with CBD was unreliable because it was based on erroneous information. The record demonstrated Dr. Maier predicated her diagnosis of Pittman, in part, on Dr. Abraham's supposed analysis of additional slides. Dr. Maier's diagnosis was fundamentally based on insufficient information, rendering her conclusion unreliable, see Curtis, 174 F.3d at 670-71. Therefore, the district court properly excluded the testimony and report.

The district court committed no reversible error in finding Dr. Maier's reliance on the presence of multi-nucleated giant cells to diagnose Pittman with



CBD was unreliable. The record demonstrated Dr. Maier's initial review of his biopsy revealed only "multi-nucleated giant cells which is concerning for progression to [CBD]" and not granulomas on biopsy. During her deposition, Dr. Maier confirmed she did not see granulomas on slides she reviewed at National Jewish.

The district court reviewed the record to determine whether it supported a diagnosis of CBD based on multi-nucleated giant cells. See *Knight*, 482 F.3d at 351 (finding expert testimony may be unreliable if not generally accepted in the scientific community). The district court reviewed the articles Dr. Maier submitted to the district court to support her "independent" finding of CBD in Pittman based on multi-nucleated giant cells and found they did not support Dr. Maier's contention. The district court committed no reversible error because the record demonstrated Dr. Maier's own research asserts a diagnosis of CBD requires both an indication of BeS and either granulomas or mononuclear infiltrates. Newman et al., *Beryllium Sensitization Progresses to Chronic Beryllium Disease: A Longitudinal Study of Disease Risk*, 171 AM. J. OF RESPIRATORY & CRITICAL CARE MEDICINE 54, 55 (2005) ("Newman et al. I") ("[CBD] was defined as evidence of BeS with granulomas and/or mononuclear cell infiltrates in lung tissue."). The district court also found no evidence in the record that Dr. Maier's diagnosis based on multi-nucleated giant cells had been tested or peer reviewed. Therefore, the district court did not abuse its discretion in excluding Dr. Maier's testimony and report about her diagnosis of Pittman as having CBD.

### 3. Admissibility of Pittman's Two Additional Slides

In its Order and Reasons, the district court explained its October 16, 2006, discovery order required the employees to "provide [Brush] . . . any tissue slides

or samples relating to Mr. Pittman" by November 14, 2006. The district court found the employees' failure to provide Brush the two slides of Pittman's tissue, which were purportedly the subject of Dr. Abraham's report, a violation of the discovery order and reviewed the employees' failure to comply under Barrett's<sup>4</sup> four-part test. Barrett's four-part test includes consideration of:

- (1) the explanation, if any, for the party's failure to comply with the discovery order;
- (2) the prejudice to the opposing party of allowing the witnesses to testify;
- (3) the possibility of curing such prejudice by granting a continuance; and
- (4) the importance of the witnesses' testimony.

95 F.3d at 380 (citation omitted).

The district court found the employees failed to offer a persuasive explanation for their failure to provide Brush the slides. The district court determined the introduction of the slides would materially prejudice Brush because it could lead to a continuance, which would result in further delay and expense in defending the lawsuit. The district court acknowledged the potential importance of the slides to Pittman had they been reliable. However, the district court found the slides were unreliable because it remained unknown "who prepared the slides, where they were prepared, when they were prepared, or if they even originated from Pittman's biopsy." Therefore, the district court concluded the additional slides should be excluded for plaintiffs' "unexcused failure" to comply with the October 16, 2006, discovery order and their unreliability. The district court affirmed this decision in its denial of the employees' motion to reconsider.

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<sup>4</sup> Barrett v. Atl. Richfield Co., 95 F.3d 375 (5th Cir. 1996).

In light of the record as a whole, the district court did not abuse its discretion in excluding the two additional slides. The district court found the employees' explanation for the failure to obtain the slides for Brush insufficient in light of the clear language of the district court's October 16, 2006, discovery order. The record supports that Dr. Maier, in her position at National Jewish, had reasonable access to the slides to have them produced for Brush.<sup>5</sup>

The district court did not abuse its discretion in finding the introduction of the slides into evidence would prejudice Brush, despite the employees' contention there would be no prejudice because the district court could simply order production of the slides. What the employees omit, in briefing this argument, is that the district court did order production of the slides in its October 16, 2006, discovery order. In fact, the district court ordered the employees to "provide [Brush] . . . any tissue slides or samples relating to Mr. Pittman" by November 14, 2006. Based on the employees' previous violation of the October 16, discovery order, the district court reasonably concluded a second order would further delay the proceedings.

The record supported the slides were unreliable because Dr. Abraham and employees' counsel acknowledged Dr. Abraham made no additional cuts on Pittman's biopsy, and therefore there should have been no additional slides to review. The district court reasonably concluded there was no information regarding where, when, and who prepared the slides and whether they even contained Pittman's tissue. Dr. Maier asserts the chain of custody had been followed, but her own email disputes the chain of custody remained intact. Therefore, the district court did not abuse its discretion in finding the two

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<sup>5</sup> The record indicates Dr. Maier had the wherewithal to dispatch the slides to experts for review, as she herself (or a lab technician at her direction) sent the slides and tissue block to Dr. Abraham in order for him to review the slides.

additional slides to be unreliable and exercising its Rule 37 discretion to exclude the slides.

B. Dismissal of All Claims Based Upon Finding No Employees Had Compensable Injuries Pursuant to Mississippi Law

1. Standard of Review

This court reviews a district court's grant of summary judgment de novo, applying the same standards as the trial court. *Langhoff Props., LLC v. BP Prods. N. Am. Inc.*, 519 F.3d 256, 260 (5th Cir. 2008) (citing *Priester v. Lowndes County*, 354 F.3d 414, 419 (5th Cir. 2004)). Summary judgment is merited when the record demonstrates "that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law." FED. R. CIV. P. 56(c). "A genuine issue of material fact exists 'if the evidence is such that a reasonable jury could return a verdict for the non-moving party.'" *Crawford v. Formosa Plastics Corp., La.*, 234 F.3d 899, 902 (5th Cir. 2000) (citing *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248, 106 S. Ct. 2505, 91 L. Ed.2d 202 (1986)).

This court reviews pleadings, depositions, admissions, and answers to interrogatories, together with affidavits, to determine no genuine issue of material fact remains. *Barrett*, 95 F.3d at 383 (citing *Celotex Corp. v. Catrett*, 477 U.S. 317, 323, 106 S. Ct. 2548, 2552-53, 91 L. Ed.2d 265 (1986)). This court reviews all evidence in a light most favorable to the non-moving party and draws all reasonable inferences in favor of the non-moving party. *Jenkins v. Cleco Power, LLC*, 487 F.3d 309, 313-14 (5th Cir. 2007) (citing *Crawford*, 234 F.3d at 902). This court will not assume, however, in the absence of any proof, that the nonmoving party could or would prove the necessary facts. *Little v. Liquid Air Corp.*, 37 F.3d 1069, 1075 (5th Cir. 1994). "Rule 56(c) mandates the entry of

summary judgment, after adequate time for discovery and upon motion, against a party who fails to make a showing sufficient to establish the existence of an element essential to that party's case." *Celotex Corp.*, 477 U.S. at 322, 106 S. Ct. at 2553.

This matter presents an issue of Mississippi state law. In reviewing *de novo* the district court's application of Mississippi law pursuant to the Erie doctrine, this court must examine Mississippi law to determine whether "any final decisions of the Mississippi Supreme Court are dispositive." See *Centennial Ins. Co. v. Ryder Truck Rental, Inc.*, 149 F.3d 378, 382 (5th Cir. 1998) (citation omitted). If there is no apposite decision, this court must forecast how the Mississippi Supreme Court would rule. See *id.* (citation omitted). This prediction may be based on Mississippi case law, dicta, general rules on the issue, decisions of other states, and secondary sources.<sup>6</sup> *Id.* (citations omitted). If there is no evidence to the contrary, this court will presume a Mississippi court would adopt the prevailing rule if the case was before it. *Id.* (citation omitted).

## 2. Possible Injuries to Maintain Any of the Employees' Claims

Pursuant to Mississippi law, claims of negligence, products liability, and breach of warranty all require an identifiable injury.<sup>7</sup> According to Dr. Maier,

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<sup>6</sup> The Mississippi Supreme Court relies on the Restatement (Second) of Torts ("Restatement") when reviewing a negligence cause of action, see *Causey v. Sanders*, — So. 2d —, 2008 WL 4664642, at \*10 (Miss. Oct. 23, 2008) (relying on Restatement), products liability cases, see *Lane v. R.J. Reynolds Tobacco Co.*, 853 So. 2d 1144 (Miss. 2003) ("Mississippi's products liability law is based on Restatement § 402A."); and breach of warranty cases brought as tort actions, see *State Stove Mfg. Co. v. Hodges*, 189 So. 2d 113, 122 (Miss. 1966) cert. denied 386 U.S. 912, 87 S. Ct. 860, 17 L. Ed. 2d 784 (1967).

<sup>7</sup> See *Paz III*, 949 So. 2d at 3 (citation omitted) (Mississippi law "does not allow recovery for negligence without showing an identifiable injury"); *Early-Gary, Inc. v. Walters*, 294 So. 2d 181, 186 (Miss. 1974) (requiring injury for products liability claim); *Bennett v. Madakasira*, 821 So. 2d 794, 809 (Miss. 2002) (holding breach of warranty theory claim cannot be submitted to

"[BeS] is by definition the demonstration of an abnormal immune response to beryllium, usually, though not always based on an abnormal [beryllium lymphocyte proliferation test ("BeLPT")].” The BeLPT is used to determine whether an individual is at risk for developing CBD. Stange et al., *The Beryllium Lymphocyte Proliferation Test: Relevant Issues in Beryllium Health Surveillance*, 46 AM. J. OF INDUSTRIAL MEDICINE 453, 453 (2004) (citations omitted). According to the employees’ evidence, BeS is diagnosed with the presence of two positive BeLPTs.<sup>8</sup> *Id.* at 455. The admissible evidence in the record shows an appropriate diagnosis of CBD includes the presence of either granulomas or mononuclear cell infiltrates and BeS. Dr. Maier’s own body of research supports this.<sup>9</sup>

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the jury without proof of a defect, which caused an injury).

<sup>8</sup> Dr. Repsher, Brush’s expert agrees the BeLPT is the appropriate method for assessing the presence of BeS, and two positive BeLPTs warrant a diagnosis of BeS. Repsher’s Affidavit was inadvertently omitted from the certified record, but is properly before the court because it is an exhibit to Record Number 70.

<sup>9</sup> An article bearing Dr. Maier’s name states “[c]hronic beryllium disease (CBD) was defined as evidence of BeS with granulomas and/or mononuclear cell infiltrates in lung tissue.” Newman et al. I, *supra*, at 55. Dr. Repsher agrees a diagnosis of CBD requires “a finding of granulomas on biopsy, as well as a finding, through lymphocyte proliferation tests . . . that a person has become ‘sensitized’ to beryllium or has ‘[BeS].’”

Based on a de novo review of the record, Pittman,<sup>10</sup> Sorapuru,<sup>11</sup> Lemon,<sup>12</sup> and Moran<sup>13</sup> are sensitized to beryllium. The evidence in the record demonstrates there is a dispute of material fact regarding whether Harris has been sensitized to beryllium.<sup>14</sup> The record reveals Pittman,<sup>15</sup> Sorapuru,<sup>16</sup>

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<sup>10</sup> In the March 31, 2002, evaluation report of Pittman, Dr. Harber stated “[t]he available data indicate that Alvin Pittman can be best classified as sensitization, non-specific in.” In Pittman’s followup examination in March 2005, Dr. Swift noted “Pittman has been classified as exhibiting sensitization, non-specific, to Beryllium.”

<sup>11</sup> In his affidavit, Sorapuru avows he had two abnormal BeLPTs in 2002 and therefore was properly diagnosed with BeS. An examination of other evidence in the record reveals a 2002 evaluation by Dr. Taquino showed Sorapuru had two positive BeLPT examinations, but exhibited “[n]o clinical signs of [CBD].”

<sup>12</sup> This is based on the testimony of Brush’s expert, which the employees do not dispute. A report on Lemon’s examination stated Lemon at best had BeS.

<sup>13</sup> In Dr. Harber’s November 12, 2002, examination of Moran, he noted Moran had “two out of three blood tests, which are positive for beryllium lymphocyte reactivity. This makes it medically probable that he does have [BeS].” Dr. Harber concluded “Moran can be best classified as Sensitized, early CBD.”

<sup>14</sup> In September 2002, Dr. Swift’s report of Harris demonstrated he had a positive response in July 2002, a positive response on August 1, 2002, and two positive responses on August 9, 2002. A July 1, 2002, report indicates another “borderline” response to beryllium. An August 1, 2002, report states Harris had a “single significant response” to beryllium sulfate, which suggested “a borderline response to beryllium” but required further interpretation. In 2003, Dr. Hansen’s impression of Harris was that he exhibited signs of chronic obstructive pulmonary disease, not CBD.

Dr. Repsher disputed Harris had BeS on the basis of his medical record, which indicated only one positive BeLPT. Despite this dispute of material fact, however, the district court’s grant of summary judgment on Harris’ claim was appropriate because BeS is not a compensable injury pursuant to Mississippi law.

<sup>15</sup> In the March 31, 2002, evaluation report of Pittman, based on results of a pulmonary function test, Dr. Harber found Pittman had “normal physiology.” He noted that “[i]t does not show a restrictive order (the pattern typically seen in advanced [CBD]).” Dr. Harber also noted that “no granulomas were observed.” Dr. Harber concluded “[t]he current data suggest that [CBD] (the disease of the lungs) is not present. There were no granulomas, and there was no diffuse mononuclear infiltrate.”

In Pittman’s followup examination in March 2005, Dr. Swift noted Pittman showed “no evidence of any pulmonary disease on the pulmonary function studies.” He also noted, “[t]he patient has no evidence of [CBD] by Dr. Phil Harber’s assessment in 2003.” Dr. Swift did not

Lemon,<sup>17</sup> and Moran do not have CBD. In its October 30, 2007, decision, the district court held there was a dispute of material fact regarding whether Moran had CBD, and therefore denied Brush's motion for summary judgment on Moran's claim. In addressing Brush's motion for reconsideration, the district court reversed its previous ruling and found Dr. Harber's "possible CBD" diagnosis for Moran to be unreliable, "where there was no indication of granulomas or mononuclear infiltrates."

On appeal, the employees dispute the district court's finding regarding Moran's claim. Based on a review of the record, however, the employees' argument is unavailing. No evidence submitted by any of the parties demonstrates Moran exhibits the diagnostic criteria for CBD.<sup>18</sup> Absent a finding

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offer his own opinion with respect to these issues, but suggested Pittman remain in the Beryllium surveillance program. The employees argue Pittman has CBD based on Dr. Maier's finding he had granulomatous inflammation on biopsy because of the presence of interstitial infiltration with mononuclear cells and the presence of granuloma. However, as discussed supra, the district court properly excluded Dr. Maier's report and testimony regarding Pittman's diagnosis and the additional two slides as unreliable.

<sup>16</sup> During Dr. Taquino's 2002 evaluation of Sorapuru, Dr. Taquino concluded Sorapuru exhibited "[n]o clinical signs of [CBD]."

<sup>17</sup> Evidence in the record regarding Lemon's health showed Lemon had "calcified granuloma but no signs of malignancy," and Dr. Rizk's impression Lemon suffered from chronic obstructive pulmonary disease, but not CBD.

<sup>18</sup> In Dr. Harber's 2002 evaluation of Moran, Dr. Harber noted the pulmonary function test showed Moran's diffusing capacity was consistent with CBD, but the ratio of diffusing capacity to alveolar volume was normal. Dr. Harber noted "[u]sually if there is actual interstitial or pulmonary vascular disease, this is [sic] ratio is reduced." Dr. Harber stated he found no granulomas on Moran's transbronchial biopsy.

Dr. Harber indicated "[t]he current data suggest that [CBD] is possible, but not definite. Based on the currently, widely used criteria, he would not be considered to have disease involving the lungs." According to Dr. Harber, "current practices [sic] is to take a diagnosis of CBD if there are two characteristics present-histopathological changes of granulomas or definite mononuclear cellular infiltrate[,] as well as definite immunologic reactivity within the lung to beryllium. In his case, the biopsy is [sic] did not show either granuloma or mononuclear infiltrate."



of granulomas or mononuclear cellular infiltrate on biopsy for Moran, the evidence demonstrates there is no dispute of material fact that Moran has CBD. See Newman et al. I, supra, at 55. Therefore, the district court did not err in granting Brush's motion for reconsideration and summary judgment on Moran's claims.

3. Is BeS a Compensable Injury Pursuant to Mississippi Law?

The issue that remains before the court is whether the BeS Moran, Sorapuru, Lemon, and Pittman exhibit is a compensable injury pursuant to Mississippi law, therefore rendering the district court's grant of summary judgment inappropriate. The district court found Mississippi law had not spoken on whether BeS was a compensable injury, but determined, "[a]bsent clear guidance from Mississippi courts, and due to the conflicts among states as to the necessary showing for a compensable injury, [it could not] find that an immune response such as BeS creates a new or separate compensable injury or cause of action under Mississippi law."

The employees argue BeS is a present injury and "the beginning of an actual disease process," specifically the beginning stage of CBD, and therefore there is a reasonable probability of future consequences from BeS. Brush contends BeS is not an injury Mississippi law recognizes, and therefore any future consequences from BeS are not compensable. Brush argues the employees' characterization of BeS as an injury is irrelevant because the issue of whether it is "compensable" is a question of law and not of fact.

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Dr. Harber concluded "[a]t the current time, the most appropriate classification is Sensitized, possible/probable early CBD. If he has the disorder, it is very early." Dr. Swift noted in his March 2005 report on Moran that Moran exhibited "no evidence of any interstitial lung disease." The employees present no statements or reports from medical experts that document granulomas or mononuclear infiltrates on Moran's biopsy.

The employees' expert, Dr. Maier, is an occupational pulmonologist.<sup>19</sup> Dr. Maier believes BeS is a "present injury," which "is an important precursor to the impairing lung disease, [CBD]." Dr. Maier concludes "[BeS] is a physiologic immune response or injury that occurs . . . to those individuals who have been exposed to beryllium in the workplace or from spouse or community exposure due to industrial beryllium facilities."

Dr. Maier's own chapter on beryllium, however, states "BeS precedes the formation of granulomas and clinical illness." LEE S. NEWMAN & LISA A. MAIER, Chapter 79: Beryllium, in CLINICAL ENVIRONMENTAL HEALTH AND TOXIC EXPOSURES 919, 922 (John B. Sullivan, Jr. & Gary R. Krieger eds., 2d ed. 2001). Dr. Maier's work also indicates "[i]ndividuals with [BeS] exhibit evidence of an immune response to beryllium but have no evidence of lung pathology or impairment." MARTYNY ET AL., Beryllium-Related Industries: Historical Perspective, in OCCUPATIONAL, INDUSTRIAL, AND ENVIRONMENTAL TOXICOLOGY 468, 470 (Michael I. Greenberg et al. eds, 2d ed. 2003). Likewise, during her deposition, when describing the nature of CBD, Dr. Maier distinguished between BeS and CBD, noting a difference between the disease itself and "beryllium-related health effects."

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<sup>19</sup> Dr. Maier is an Associate Professor at National Jewish Medical and Research Center in the Division of Environmental and Occupational Health and Sciences in the Department of Medicine with a joint appointment at the University of Colorado at Denver and Health Sciences Center in the Division of Pulmonary and Critical Care Sciences in the Department of Medicine and in the Department of Preventive Medicine and Biometrics. She is certified in internal medicine, pulmonary medicine, critical care medicine, and occupational medicine. Dr. Maier has specialized in environmental and occupational lung disease, with an emphasis in CBD, for more than ten years.

Brush's expert, Dr. Repsher, is a board-certified pulmonary physician.<sup>20</sup> Dr. Repsher opines BeS is a response in the immune system, which makes an individual capable of having a reaction to beryllium. Dr. Repsher explains "[BeS] is the response of a person's immune system to a material it recognizes as an antigen," however he notes a person with BeS has no "impairment" or "injury" until the person develops CBD.

The evidence clearly establishes excessive exposure to beryllium provokes a physical change in the body, causing BeS, and both parties' experts agree this takes place.<sup>21</sup> That there is a change, however, is not relevant for purposes of determining whether the employees may proceed past the summary judgment phase with their claims. The quintessential issue is whether any physiologic change in the body rises to the level of compensable injury pursuant to Mississippi law. The Mississippi Supreme Court holds "where . . . there is no dispute as to the facts of a case, the issues to be decided become questions of law." *Total Transp., Inc. of Miss. v. Shores*, 968 So. 2d 400, 406 (Miss. 2007) (citations omitted). The question of whether BeS is a compensable injury, therefore, is a question of law.

Mississippi law does "not recognize a cause of action for fear of possibly contracting a disease at some point in the future." *Brewton v. Reichhold Chems., Inc.*, 707 So. 2d 618, 620 (Miss. 1998) (citations omitted). Although, the Mississippi Supreme Court has previously acknowledged "where it is established

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<sup>20</sup> Dr. Repsher has specialized in environmental and occupational lung disease for more than thirty years. Dr. Repsher has treated individuals with CBD since 1974. The employees contend his testimony is unreliable pursuant to Daubert. An analysis of the reliability of Dr. Repsher's testimony need not be undertaken pursuant to Daubert because this court can rely on the employees' expert to reach its decision on whether Mississippi law recognizes BeS as a compensable injury.

<sup>21</sup> This finding adheres apart from any consideration of Dr. Repsher's findings.

that future consequences from an injury to a person will ensue, recovery . . . may be had, but such future consequences must be established in terms of reasonable probabilities." *Entex, Inc. v. Raspberry*, 355 So. 2d 1102, 1104 (Miss 1978) (citation omitted). Where a party fails to proffer "'substantial proof of exposure and medical evidence' that indicates the plaintiffs may contract any disease at any point in time in the future" summary judgment is appropriate. *Brewton*, 707 So. 2d at 620 (citation omitted).

Based on the record, there is simply no dispute the rate of progression from BeS to CBD is unknown to any degree of reasonable medical certainty.<sup>22</sup>

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<sup>22</sup> According to Dr. Maier's affidavit,

approximately six to eight percent per year of individuals with sensitization who are followed over time developed CBD. It is likely that the majority of individuals with sensitization will eventually develop CBD. Some of these individuals have subsequently gone on to develop physiologic impairment and require therapy for CBD. Thus, [BeS] is not a normal response, as it is not found in normal individuals.

In 2003, however, Dr. Maier and her colleagues noted "BeS has been shown to precede CBD, but the frequency and rate of progression from sensitization to disease is unknown." Newman et al., *The Fourth "Practical Approach to Chronic Beryllium Disease. Prevention, Medical Evaluation, and Management" Conference: Abstracts: Beryllium Sensitization Progresses to Chronic Beryllium Disease*, 20 *SARCOIDOSIS VASCULITIS & DIFFUSE LUNG DISEASES* 155, 155 (2003). Dr. Maier and her colleagues surmised "BeS progresses into CBD at a rate of approximately 8% per year, though not all BeS may progress. Beryllium-sensitized patients merit medical counseling and surveillance for signs of progression to disease." *Id.* In 2005, Dr. Maier and her colleagues noted the range of the rate of conversion from sensitivity to beryllium was "between 5.8 and 8.1%/year. Notably, in the average follow-up period of 4.5 years, 69% of all BeS subjects have not developed CBD." Newman et al. I, *supra*, at 56. Dr. Maier concluded her own study on the rate of progression to CBD demonstrated "that BeS progresses to CBD over time at a rate of about 6 to 8%/year after initial diagnosis." *Id.* at 58. Dr. Maier has found the rate of progression from BeS to CBD, if at all, could occur from 3.5 years to 44.5 years. *Id.* at 59.

Other scientific literature submitted into evidence bearing Dr. Maier's name as co-author indicates "[b]eryllium-sensitized (BeS) individuals possess a beryllium-specific immune response limited to the blood and show no evidence of lung disease. Only a subset of these individuals progress to [CBD]." Pott et al., *Frequency of Beryllium-Specific, TH 1-Type Cytokine-Expressing CD4+ T Cells In Patients with Beryllium-Induced Disease*, 115 *J. ALLERGY CLIN. IMMUNOL.* 1036, 1036 (2005). According to one of her articles, "[d]epending on the nature

The employee's own evidence demonstrates this best. The record is rife with Dr. Maier's and other experts' mere conjecture that BeS leads to CBD. This speculation is premised upon studies that at best show it is possible for BeS to lead to CBD. Mere possibility is insufficient. *Daughtery v. Conley*, 906 So. 2d 108, 110 (Miss. App. 2004) ("[T]estimony in terms of medical probability, rather than possibility, is required by Mississippi law.") Reasonable medical certainty is required. *Catchings v. State*, 648 So. 2d 591, 596 (Miss. 1996) ("[O]nly opinions formed by medical experts . . . which can be stated with reasonable medical certainty have probative value."). Therefore, the employees' argument there is a reasonable probability of future consequences from BeS is simply not backed by evidence in the record.

Nonetheless, the Mississippi Supreme Court has held damages could be assessed where physical injury is absent if a defendant's conduct was outrageous and foreseeably would cause emotional distress or "there [wa]s a resulting physical illness or assault upon the mind, personality or nervous system of the plaintiff which is medically cognizable and which requires or necessitates treatment by the medical profession." *Leaf River Forest Prods., Inc. v. Ferguson*, 662 So. 2d 648, 658 (Miss. 1995) (citations omitted). In *Ferguson*, the plaintiffs feared disease from dioxin but failed to produce any evidence of their exposure to it. *Id.* The Mississippi Supreme Court found the plaintiffs' lack of evidence of exposure to "dangerous or harmful agent[s]" and the lack of "medical evidence

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of the exposure and the genetic susceptibility of the individual, it is estimated that disease develops in 1% to 16% of exposed individuals."

Based on the substantial uncertainty in Dr. Maier's work regarding the progression of BeS to CBD, the fact that Dr. Repsher states "[t]he published literature indicates that only a small percentage of the overall population can ever develop [BeS]. And not all sensitized persons develop CBD," and "[t]here is no basis in the existing medical literature for predicting that a person who is only sensitized to beryllium is more likely than not, much less reasonably certain, to develop CBD," *id.*, need not be considered or assessed for its reliability.

pointing to possible or probable future illness” failed to sufficiently support either type of emotional distress claim. *Id.* Ferguson’s guidance here is unavailing because the record is devoid of any allegation or evidence of intentional or outrageous conduct leading to emotional distress in the employees, nor have the employees shown “resulting physical illness or assault upon the mind, personality or nervous system” “which is medically cognizable and which requires or necessitates treatment by the medical profession.” *Id.*

The Mississippi Supreme Court’s decision in *Paz III* provides the best insight into whether BeS is a compensable injury pursuant to Mississippi law. The Mississippi Supreme Court faced the question of “[w]hether the laws of Mississippi allow for a medical monitoring cause of action, whereby a plaintiff can recover medical monitoring costs for exposure to a harmful substance without proving current physical injuries from that exposure?” *Paz III*, 949 So. 2d at 2. The Mississippi Supreme Court framed the issue as this: “Plaintiffs claim they should be able to recover damages in the form of medical monitoring costs solely on the basis that they have been exposed to harmful levels of beryllium and are in danger of suffering from latent diseases.” *Id.* at 3 (citation omitted).

In answering the certified question, the Mississippi Supreme Court made clear that whether it would answer in the affirmative depended upon whether the “cause of action includes a compensable injury.” *Id.* at 5. The Mississippi Supreme Court noted “exposure to a dangerous substance is not an injury.” *Id.* (citation omitted). In particular, the Mississippi Supreme Court found “[e]xposure to a potentially harmful substance does not in itself constitute a personal injury.” *Id.* (citation omitted).

The question before the Mississippi Supreme Court in Paz III was based on allegations very similar to what the employees have alleged in this matter. For instance, the employees in the instant matter have alleged

[h]armful exposure to the hazardous substance beryllium causes various personal injuries from sub-clinical, cellular, and sub-cellular damage, to acute and chronic lung disease, dermatologic disease and cancer. Respiratory diseases are most commonly seen from harmful exposure to beryllium and manifest themselves on a continuum from acute inhalation injury to acute pneumonitis to [BeS] and the chronic indolent form of [CBD].

The Paz plaintiffs similarly alleged “[h]armful exposure to the hazardous substance beryllium causes various personal injuries from sub-clinical, cellular, and sub-cellular damage, to acute and chronic lung disease, dermatologic disease and cancer.” Likewise, they alleged “[r]espiratory diseases are most commonly seen from exposure to beryllium and manifest themselves on a continuum from acute inhalation injury to acute pneumonitis to BeS and the chronic indolent form of [CBD].”

The employees in the instant matter also allege

[a]s a foreseeable, direct and proximate result of their exposure to the hazardous substance beryllium, those plaintiffs and other Stennis Space Center workers, contract or outside workers, invitees, and their families already suffer and will suffer in the future personal injuries in the form of sub-clinical, cellular, and sub-cellular damage and some have suffered from acute and chronic lung disease, and [CBD].

Similarly, the Paz plaintiffs alleged

[a]s a foreseeable, direct and proximate result of their exposure to the hazardous substance beryllium, plaintiffs and other Boeing and DCMA employees who work or have worked at Stennis and Canoga Park, and their families, already have suffered and will suffer in the future personal injuries in the form of sub-clinical, cellular, sub-

cellular damage, and some will suffer from acute and chronic lung disease, dermatologic disease, and [CBD].

Hence, the allegations before the district court in this matter were strikingly similar to the allegations before the Mississippi Supreme Court in Paz III.

In answering this court's certified question in Paz III, the Mississippi Supreme Court stated "a claim for medical monitoring, as Plaintiffs present it, lacks an injury." 949 So. 2d at 3 (emphasis added). The Mississippi Supreme Court concluded that because "Mississippi requires the traditional elements of proof in a tort action, it has refused to recognize a category of potential illness actions." Id. at 7 (emphasis added). The Mississippi Supreme Court noted "[n]one of the plaintiffs ha[d] suffered physical injury from the alleged exposure." Id. at 3 (emphasis added). Pursuant to Mississippi law, "exposure" is "a claim for harm which is not compensable under Mississippi law." Id. at 5.

The Mississippi Supreme Court's decision in Paz III appears to answer the question of whether BeS is a compensable injury as a matter of Mississippi law. Based on the nearly identical allegations, including sub-clinical and sub-cellular changes, which none of the parties dispute, and which the Mississippi Supreme Court refused to recognize as "physical injur[ies]," the logical conclusion is BeS is not a compensable injury pursuant to Mississippi law. The Mississippi Supreme Court refused to recognize the same injuries in Paz III to afford those plaintiffs a cause of action for medical monitoring. This court cannot circumvent that holding by declaring BeS, the same "sub-clinical, cellular, and sub-cellular" changes alleged by the Paz plaintiffs, can now constitute a legal injury, without completely ignoring the Mississippi Supreme Court's holding in Paz III.

Nonetheless, because the holding in Paz III is not directly on point, this



court may look to other available sources, such as treatises and legal commentaries. See *Centennial Ins. Co.*, 149 F.3d at 382. Mississippi courts rely on the Restatement, and therefore, its provisions warrant review in an attempt to shed light on how the Mississippi Supreme Court might act.

The Restatement defines “injury” as “the invasion of any legally protected interest of another,” RESTATEMENT (SECOND) OF TORTS § 7(1), which is distinguishable from “harm,” “the existence of loss or detriment in fact of any kind to a person resulting from any cause” *id.* § 7(2). “Injury” connotes a legally protectable interest. *Id.* § 7 cmt. a. According to comment d of section 7, “[h]arm, like injury, is not necessarily actionable.” *Id.* § 7 cmt. d. “[H]arm . . . gives rise to a cause of action only when it results from the invasion of a legally protected interest, which is to say an injury.” *Id.*

The parties agree when an individual has BeS, a physiologic change in the blood has occurred. But even if this could be construed as a harm pursuant to the Restatement, this does not necessarily lead to the conclusion BeS is actionable. A review of the Restatement simply poses the same question before this court: whether BeS amounts to “the invasion of a legally protected interest,” *id.* § 7 cmt. a, such that it is a “compensable injury.”

The employees contend the Eleventh Circuit’s holding in *Parker v. Wellman*, 230 Fed. Appx. 878 (11th Cir. 2007) should guide the decision here. It does not.<sup>23</sup> The Eleventh Circuit found an issue of material fact because the parties’ experts disagreed on whether BeS was a current disease and likely to develop into CBD. *Id.* at 884. The Eleventh Circuit concluded these disputes should be settled by a jury. *Id.* The Eleventh Circuit’s holding is unpersuasive here, however, for it, like this court must do, determined its decision pursuant

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<sup>23</sup> Both Dr. Maier and Dr. Repsher were experts in *Parker*.

to state law. The Eleventh Circuit's decision, based on Georgia law, is simply inapposite.

The rationale of the Mississippi Supreme Court's decision in Paz III and its common law analysis leads this court to conclude the Mississippi Supreme Court would find BeS is not a compensable injury. The Mississippi Supreme Court did not permit the Paz plaintiffs to rely upon sub-cellular, cellular, or sub-clinical changes without more, or in and of themselves, to support their cause of action for medical monitoring. This seems to be the Mississippi Supreme Court's line in the sand for a plaintiff's "legally protected interest." Therefore the district court did not err in granting summary judgment.

#### CONCLUSION

For the reasons stated, the judgment of the district court is AFFIRMED.<sup>24</sup>

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<sup>24</sup> This does not preclude the employees from filing suit if they ever develop CBD. See Ferguson, 662 So. 2d at 658.