UNITED STATES DISTRICT COURT

SOUTHERN DISTRICT OF CALIFORNIA

JESUS ROMERO, a Minor, by and through his Guardian ad Litem, MERIDA RAMOS,

Plaintiffs,

v.

S. SCHWAB COMPANY, INC.; RL CHILDRENSWEAR COMPANY, LLC; SYLVIA COMPANY, LLC; CUNY ASSOCIATES, LLC; AND LM SERVICES LLC.

Defendants.

Case No. 15-CV-815-GPC-MDD

ORDER:

1) GRANTING IN PART AND DENYING IN PART PLAINTIFF'S MOTION TO EXCLUDE EXPERT TESTIMONY OF DR. DAVID HOWITT, [Dkt. No. 152];

2) GRANTING IN PART AND DENYING IN PART DEFENDANTS' MOTION TO EXCLUDE EXPERT TESTIMONIES OF DR. DAVID HALL, [Dkt. No. 148], DR. MICHEL BRONES, [Dkt. No. 147], AND PAUL SCHWARTZMAN, [Dkt. No. 150];

3) DENYING DEFENDANTS' MOTION TO EXCLUDE EXPERT TESTIMONIES OF DR. DAVID XU; AND ANDREW ELLISON, [Dkt. Nos. 149, 156.]

Before the Court are Plaintiff's fully briefed motion to exclude the expert testimony of Dr. David Howitt, (Dkt. Nos. 152, 172, 178), and Defendants'[1] fully briefed motions to exclude the expert testimonies of Dr. Michel Brones, (Dkt. Nos. 147, 165, 175), Dr. David Hall, (Dkt. Nos. 148, 168, 176), Dr. David Xu, (Dkt. Nos. 149, 167, 177), Paul Schwartzman, (Dkt. Nos. 150, 163, 180), and Andrew Ellison, (Dkt. Nos. 156, 164 179). A hearing was held on November 17, 2017. (Dkt. No. 206.) Maria Weitz, Esq. appeared on behalf of Plaintiff and Timothy Irving, Esq. and Kristi Blackwell, Esq. appeared on behalf of Defendants. (Id.) On November 29, 2017, Defendants filed the full deposition transcript of Dr. Howitt. (Dkt. No. 216.)

Based on the reasoning below, the Court GRANTS in part and DENIES in part Plaintiff's motion to exclude the expert testimony of Dr. David Howitt. The Court GRANTS in part and DENIES in part Defendants' motions to exclude the expert testimonies of Dr. David Hall, Dr. Michel Brones, and Paul Schwartzman. The Court further DENIES Defendants' motions to exclude the expert testimonies of Dr. David Xu and Andrew Ellison.

Background[2]

On January 30, 2005, Plaintiff Jesus Romero and his family were planning an outing to Rosarito, Mexico. Jesus, who was seven years old, and his younger brother, Marcos, who was six years old, were dressed and ready, and went next door to a neighbor's house to use a lighter. Both were sitting down and while Jesus held a flower or green weed, Marcos lit the flower or weed with the lighter. Jesus testified that he let go of the flower or weed because his fingers got hot and the lit flower or weed landed on his shirt near his stomach. Jesus told his brother to go get

[1] Defendants include S. Schwab Company, Inc.; RL Childrenswear Company, LLC; Sylvia Company, LLC; CUNY Associates, LLC; and LM Services, LLC (collectively Defendants" or "Schwab Defendants").

[2] The facts are taken from the Court's order on Schwab Defendants' motion for summary judgment. (Dkt. No. 99.)

help so Marcos ran into the house and their father came out, ripped the shirt off, dropped it to the concrete and stepped on it to extinguish the flames. Jesus suffered second and third degree burns covering about 25% of his body. (Dkt. No. 128, Am. PTO at 5[3].)

On the day of the incident, Jesus was wearing a boy's short-sleeved Ralph Lauren red-and-white gingham button-down dress shirt ("Shirt"). Jesus' mother Merida, only bought 100% cotton clothing for her family and would not have purchased the Shirt if it had not been labeled 100% cotton.

Jesus alleges that 1) Defendants manufactured the Shirt; and 2) although the Shirt was labeled 100% cotton, it was not; instead, it was composed of a "highly flammable, dangerous, and unlawful blend" of 90% cotton, 5% rayon, and 5% nylon causing Jesus more severe burns than he would have suffered if the Shirt had been 100% cotton. Plaintiff alleges causes of action for strict product liability for manufacturing defect; negligence; breach of warranty; and negligent misrepresentation against Defendants. (Dkt. No. 17, FAC; Dkt. No. 128, Am. PTO.) Defendants contend that they did not manufacture the Shirt, it was labeled correctly and made out of 100% cotton, and they are not liable for Jesus' injuries.

Discussion

A. Daubert Legal Standard

The trial judge must act as the gatekeeper for expert testimony by carefully applying Federal Rule of Evidence ("Rule") 702 to ensure specialized and technical evidence is "not only relevant, but reliable." Daubert v. Merrell Dow Pharms. Inc., 509 U.S. 579, 589 & n.7 (1993); accord Kumho Tire Co. Ltd. v. Carmichael, 526 U.S. 137, 147 (1999) (Daubert imposed a special "gatekeeping obligation" on trial judges).

Under Rule 702, a witness, "qualified as an expert by knowledge, skill,

[3] Page numbers are based on the CM/ECF pagination.

experience, training, or education, may testify" . . . if "a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case." Fed. R. Evid. 702. The proponent of the evidence bears the burden of proving the expert's testimony satisfies Rule 702. Lust By & Through Lust v. Merrell Dow Pharm., Inc., 89 F.3d 594, 598 (9th Cir. 1996).

In applying Rule 702, the Ninth Circuit "contemplates a broad conception of expert qualifications." Hangarter v. Provident Life & Accident Ins. Co., 373 F.3d 998, 1015 (9th Cir. 2004) (quoting Thomas v. Newton Int'l Enters., 42 F.3d 1266, 1269 (9th Cir. 1994)). "Shaky but admissible evidence is to be attacked by cross examination, contrary evidence, and attention to the burden of proof, not exclusion." Primiano v. Cook, 598 F.3d 558, 564 (9th Cir. 2010) (citing Daubert, 509 U.S.at 596).

On the other hand, the district court must act as a gatekeeper to exclude "junk science." Messick v. Novartis Pharms. Corp., 747 F.3d 1193, 1199 (9th Cir. 2014); Ellis v. Costco Wholesale Corp., 657 F.3d 970, 982 (9th Cir. 2011) ("Under Daubert, the trial court must act as a "gatekeeper" to exclude junk science that does not meet Federal Rule of Evidence 702's reliability standards by making a preliminary determination that the expert's testimony is reliable.").

Under Daubert, scientific evidence must be both reliable and relevant. Daubert, 509 U.S. at 590-91. Scientific evidence is reliable "if the principles and methodology used by an expert are grounded in the methods of science." Clausen v. M/V New Carissa, 339 F.3d 1049, 1056 (9th Cir. 2003). The focus of the district court's analysis "must be solely on principles and methodology, not on the conclusions that they generate." Daubert, 509 U.S. at 595. "[T]he test under Daubert is not the correctness of the expert's conclusions but the soundness of his

methodology." Daubert v. Merrell Dow Pharms., Inc., 43 F.3d 1311, 1318 (9th Cir. 1995) ("Daubert II"). Second, the proposed expert testimony must be "relevant to the task at hand," meaning that it "logically advances a material aspect of the proposing party's case." Daubert, 509 U.S. at 597.

As one Ninth Circuit court simply stated, the test is "whether or not the reasoning is scientific and will assist the jury. If it satisfies these two requirements, then it is a matter for the finder of fact to decide what weight to accord the expert's testimony." Kennedy v. Collagen Corp., 161 F.3d 1226, 1231 (9th Cir. 1998). "Disputes as to the strength of [an expert's] credentials, faults in his use of [a particular] methodology, or lack of textual authority for his opinion, go to the weight, not the admissibility, of his testimony.'" Id. (quoting McCullock v. H.B. Fuller Co., 61 F.3d 1038, 1044 (2d Cir. 1995)).

As an initial matter, the Court notes that both parties use many of the same arguments to challenge each other's expert testimonies. Many of the parties' arguments challenge how the recognized methodology in the industry was used by each expert and his interpretation. These disputes challenge the conclusions of the experts, and not the reliability of the expert's testing method. As one recent Ninth Circuit court noted, "[w]here, as here, the experts' opinions are not the "junk science" Rule 702 was meant to exclude . . . the interests of justice favor leaving difficult issues in the hands of the jury and relying on the safeguards of the adversary system-'[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof'- to 'attack[ ] shaky but admissible evidence . . . .'" Wendell v. GlaxoSmithKline LLC, 858 F.3d 1227, 1237 (9th Cir. 2017) (internal citations omitted).

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B. Plaintiff's Motion to Exclude Expert Testimony of Dr. David G. Howitt[4]

David G. Howitt, Ph.D. ("Dr. Howitt") is Defendants' designated expert to testify about the materials and fibers in the Shirt; the methodology for identifying and distinguishing fabrics; the ignition, flammability and combustion of various fabrics; and the flammability standards for garments. (Dkt. No. 128, Am. PTO at 16.)

Plaintiff moves to exclude Dr. Howitt's testimony that "(i) the Subject Shirt is 100 percent cotton, (ii) the Subject Shirt's fabric content had no impact on the severity of Jesus's burns, (iii) the Subject Shirt's weight (areal density) was above the threshold requiring flammability testing under the 1953 Flammable Fabrics Act ("FFA"), 15 U.S.C. § 1191, *et seq*., and (iv) the Subject Shirt is virtually indistinguishable from exemplar shirts manufactured by Ralph Lauren Corporation." (Dkt. No. 152 at 8.)

Plaintiff claims that Dr. Howitt is not qualified as an expert in fiber identification and textile burning behavior because he lacks superior knowledge, training or experience and only has a general background in materials. For example, Plaintiff asserts that Dr. Howitt's opinions are unreliable because his experience is limited to a range of non-clothing items, such as automobile upholstery, house fires, furniture fires, and spontaneous ignition of adulterated rags and admits no experience in evaluating rayon, never researched burning behavior of cotton/rayon, cotton/nylon or cotton/nylon/rayon blends and his research into post-

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[4] As part of his motion, Plaintiff filed a request for judicial notice of screenshots from the Federal Trade Commission's online database for registration records, relevant pages from the executed Asset Purchase Agreement between RLC and Schwab Defendants, copy of the search results in the Competition Bureau's Registration Records for CA Identification Number 16190, a copy of Schwab Defendants' insurance policy, and Oxford Industries, Inc.'s Form 8-K submitted to the U.S. Securities and Exchange Commission. (Dkt. No. 152-1.) Defendants did not file an opposition. Facts proper for judicial notice are those not subject to reasonable dispute and either "generally known" in the community or "capable of accurate and ready determination" by reference to sources whose accuracy cannot be reasonably questioned. Fed. R. Evid. 201. Because the documents are capable of accurate and ready determination by sources whose accuracy cannot reasonably be questioned, the Court GRANTS Plaintiff's request for judicial notice.

ignition melting, shrinking, and charring behavior of textile is limited to this case. Moreover, Plaintiff argues that Dr. Howitt's conclusions are complete with false assumptions rather than scientifically valid principles. In opposition, Defendant argues that Dr. Howitt is qualified as an expert on the opinions that Plaintiff is challenging.

Rule 702 requires that an expert possess "knowledge, skill, experience, training, or education" sufficient to "assist" the trier of fact, which is "satisfied where expert testimony advances the trier of fact's understanding to any degree." Abarca v. Franklin Cnty. Water Dist., 761 F. Supp. 2d 1007, 1029-30 (E.D. Cal. 2011) (citations omitted). "The threshold for qualification is low for purposes of admissibility; minimal foundation of knowledge, skill, and experience suffices." PixArt Imaging, Inc. v. Avago Tech. Gen. IP (Singapore) Pte. Ltd., No. C 10–00544 JW, 2011 WL 5417090, at *4 (N.D. Cal. Oct. 27, 2011) (citing Hangarter, 373 F.3d at 1015-16) (25 years working in the insurance industry in general provided "minimal foundation of knowledge, skill, and experience" to qualify as expert in practices and norms of insurance companies in the context of a bad faith claim). "A witness can qualify as an expert through practical experience in a particular field, not just through academic training." Rogers v. Raymark Indus., Inc., 922 F.2d 1426, 1429 (9th Cir. 1991).

"Rule 702 is broadly phrased and intended to embrace more than a narrow definition of qualified expert," Thomas, 42 F.3d at 1269, and "[g]aps in an expert witness's qualifications or knowledge generally go to the weight of the witness's testimony, not its admissibility," Abarca, 761 F. Supp. 2d at 1028 (quoting Robinson v. GEICO General Ins. Co., 447 F.3d 1096, 1100 (8th Cir. 2006)) (internal quotation marks omitted). An expert's lack of specialization affects the weight of his or her testimony and not its admissibility. In re Silicone Gel Breast Implants Prods. Liab. Litig., 318 F. Supp. 2d 879, 889 (C.D. Cal. 2004) (citing Holbrook v. Lykes Bros. S.S. Co., 80 F.3d 777, 782 (3d Cir. 1996)); see also

Hangarter, 373 F.3d at 1015-16 (finding the district court did not abuse its discretion in permitting expert witness with general qualifications in insurance field to testify specifically about bad faith claims); United States v. Garcia 7 F.3d 885, 889 (9th Cir. 1993) ("lack of particularized expertise goes to the weight accorded her testimony, not to the admissibility of her opinion as an expert.").

Dr. Howitt has a Ph.D. in the Science of Materials and Engineering from the University of California at Berkeley, and a B.A. in Metallurgy from Oxford University, and is a Professor Emeritus of the Science of Materials at the University of California at Davis. (Dkt. No. 172-1, Howitt Decl. ¶ 2.) He specializes in the characterization and behavior of materials with specialized expertise in ignition and combustion of materials. Id. For the past thirty (30) years, Dr. Howitt has taught classes on the characterization of materials with techniques such as "optical microscopy (including polarized light microscopy 'PLM' and phase-contrast microscopy 'PCM'); electron microscopy (including scanning electron microscopy ('SEM') transmission electron microscopy ('TEM') and scanning transmission electron microscopy ('STEM'); spectroscopy and chromatography (including Fourier-transform infrared spectroscopy ('FTIR'), mass spectrometry ('MS') gas chromatography ('GCMS') and X-ray microanalysis (including energy dispersive x-ray spectroscopy ('EDS'), wavelength dispersive x-ray spectroscopy ('WDS') and x-ray powder diffraction ('XRD')." (Id. ¶ 3.) He is also past Chairman of the Steering Committee of National Center for Electron Microscopy, a U.S. Department of Energy National Laboratory operated by the University of California. (Id. ¶ 4.) He was also the founder of the fully-credentialed Forensic Science Graduate Program at U.C. Davis and established the Advanced Materials Characterization and Testing facility. (Id.) He has published numerous journal articles, professional papers and books over the past forty (40) years. (Dkt. No. 172-3, Howitt Decl., Ex. B.) Lastly, he has been deposed and testified in court as a forensic materials expert on more than 120 occasions. (Dkt. No. 172-1, Howitt Decl. ¶ 4.)

Dr. Howitt's over thirty years of experience in the field of materials science, and specialization in ignition and combustion of materials provides a "minimal foundation of knowledge, skill, and experience" to qualify as an expert in fiber identification and textile burning behavior. See Hangarter, 373 F.3d at 1015-16. Moreover, he taught courses in the characterization of materials using techniques that are also used to identify fibers such as PLM, SEM, and FTIR. (See Dkt. No. 148, Ds' Mot. to Exclude Dr. Hall at 7 ("Fiber identification can be measured by various methods, including Scanning Electron Microscopy (SEM), Optical Microscopy, Polarized Light Microscopy ('PLM'), Infrared Spectroscopy, Fourier Transform Infrared Spectroscopy ('FTIR'), and Attenuated Total reflectance ('ATR').") Any challenges to Dr. Howitt's qualification based on his lack of specialization can be made at trial. See In re Silicone Gel Breast Implants Prods. Liab. Litig., 318 F. Supp. 2d at 889. Accordingly, Plaintiff's argument challenging Dr. Howitt's qualifications is without merit.

Plaintiff also argues that Dr. Howitt's opinions demonstrate a misunderstanding of scientific principles relating to fiber identification by relying on incorrect assumptions and ignoring accepted protocols and recognized standards for fiber sampling. Plaintiff does not dispute that the tests used by Dr. Howitt are used by experts in fiber identification. (Dkt. No. 152 at 12 (Plaintiff acknowledges that the tests used by Dr. Howitt are "markers an expert in fiber identification might look to").) Instead, Plaintiff challenges Dr. Howitt's use of the methodologies to reach his conclusion which goes to the weight of the evidence and not admissibility. See Kennedy, 161 F.3d at 1231 ("Disputes as to . . . faults in his use of [a particular] methodology . . . go to the weight, not the admissibility, of his testimony."); Shimozono v. May Dept. Stores Co., No. 00-04261 WJR, 2002 WL 3437390, at *8 (C.D. Cal. Nov. 20, 2002) (citation omitted) (arguments that an expert relied on unfounded assumptions in forming his opinion go to the weight, not the admissibility, of expert testimony).

Similarly, Plaintiff challenges Dr. Howitt's opinion concerning the areal density (weight) of the Shirt because he failed to adhere to the accepted standards of measurement such as failing to properly condition the sample by removing excessive moisture. Dr. Howitt responds that Plaintiff is mistaken in his argument, cites to published literature, and disputes Plaintiff's arguments concerning the acceptable standards. Plaintiff's arguments challenge how Dr. Howitt performed a particular methodology which goes to the weight of Dr. Howitt's testimony and not its admissibility. See id.

Next, Plaintiff contends that Dr. Howitt blindly accepted the conclusions of three laboratories that conducted testing of the Shirt while having no knowledge of the methods used to obtain the results. He argues that Dr. Howitt's bare reliance on the reputation, expertise and judgment of three scientists to conduct fiber identification without any information to assess the trustworthiness and reliability is insufficient. Dr. Howitt responds that he has extensive experience and indisputable credentials in the optical, FTIR and other analytical techniques used by the three independent laboratories. (Dkt. No. 172-1, Howitt Decl. ¶ 18.)

Under Rule 703, an expert may base an opinion on "facts or data in the case that the expert has been made aware of or personally observed." Fed. R. Evid. 703. Rule 703 allows, otherwise inadmissible evidence, to be admissible if the expert opinion is based on "facts or data" that "experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the subject" as long as the probative value outweighs their prejudicial effect. Fed. R. Evid. 703.[5]

[5] Rule 703 provides,

> An expert may base an opinion on facts or data in the case that the expert has been made aware of or personally observed. If experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the subject, they need not be admissible for the opinion to be admitted. But if the facts or data would otherwise be inadmissible, the proponent of the opinion may disclose them to the jury only if their probative value in helping the jury evaluate the opinion

Footnote Continued on Next Page

"[A]n expert may rely on data that she did not personally collect," and "need not have conducted her own tests." Gussack Realty Co. v. Xerox Corp., 224 F.3d 85, 94-95 (2d Cir. 2000); Matter of James Wilson Ass., 965 F.2d 160, 172 (7th Cir. 1992) (expert allowed to testify to an opinion formed on the basis of information handed to him rather than developed by him). "[N]umerous courts have held that reliance on scientific test results prepared by others may constitute the type of evidence that is reasonably relied upon by experts for purposes of Rule of Evidence 703." Monsanto Co. v. David, 516 F.3d 1009, 1015 (Fed. Cir. 2008). Rule 703 "merely relaxes, for experts, the requirement that witnesses have personal knowledge of the matter to which they testify." Claar v. Burlington Northern R. Co., 29 F.3d 499, 501 (9th Cir. 1994); see also Daubert, 509 U.S. at 591 (noting that Rule 703's "relaxation of the usual requirement of firsthand knowledge . . . is premised on an assumption that the expert's opinion will have a reliable basis in the knowledge and experience of his discipline.")

Rule 703 allows an expert to disclose hearsay only for the limited purpose of explaining the basis of his opinion and not for the truth of the underlying matter. Paddack v. Dave Christensen, Inc., 745 F.2d 1254. 1262 (9th Cir. 1984) ("It does not allow the admission of the reports to establish the truth of what they assert."). "Under [Rule 703], 'basis evidence' that is not admissible for its truth may be disclosed even in a jury trial under appropriate circumstances. The purpose for allowing this disclosure is that it may assist the jury to evaluate the expert's opinion." Williams v. Illinois, 567 U.S. 50, 78 (2012).

Plaintiff argues that Dr. Howitt was not familiar with the methods and reasons

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FOOTNOTE CONTINUED FROM PREVIOUS PAGE

substantially outweighs their prejudicial effect.

Fed. R. Evid. 703.

underlying the three independent laboratories' conclusions, and merely acted as a mouthpiece of a scientist in a different specialty. Defendants disagree.

After Dr. Howitt conducted his own SEM and optical microscopic analysis, he had the swatch of the Shirt examined by three leading, independent national laboratories to assess its composition. (Dkt. No. 172-1, Howitt Decl. ¶¶ 14-17.) Forensic Analytical Laboratories ("FAL") is an independent laboratory used by law enforcement agencies and defendants in criminal cases. (Id.) They conducted a fiber analysis using PLM microscopy and FTIR Spectroscopy. (Id. ¶ 15.) FAL's report concluded that "*The swatch of fabric is identified as containing 100% cotton fibers* in an alternating red and white pattern." (Id. (emphasis in original).)

At his deposition, Dr. Howitt testified that he was present for some but not all the testing conducted by FAL. (Dkt. No. 216-2, Howitt Depo. at 227:25-228:8.) He was present when they did the FTIR, some microscopy, some polarized light, some regular microscopy, and some microscopy with a KEYENCE microscope. (Id.) He stated he was present for the main fiber testing of the swatch. (Id. at 228:12-18.) After they conducted the fiber testing of the swatch, Dr. Howitt left and allowed FAL to finish examining the burnt fabric which Dr. Howitt also directed them to examine. (Id.) Moreover, Dr. Howitt is familiar and has taught courses using the PLM and FTIR techniques that Forensic Analytical Laboratories conducted. (Dkt. No. 172-1, Howitt Decl. ¶ 3.) Contrary to Plaintiff's argument, Dr. Howitt was present for the fiber testing of the Shirt and is intimately familiar with the procedures used by FAL. Thus, the Court rejects Plaintiff's argument that Dr. Howitt is blinding accepting the conclusions of FAL.

The swatch sample was also sent to Gaston College Textile Technology Center ("Gaston College") to test the fabric using infrared microscopy techniques. (Id. ¶ 16.) Gaston specializes in fiber analysis and identification. (Id.) Gaston College concluded that the Shirt swatch is 100% cotton. (Id.)

It was noted at the deposition that there were two reports generated by Gaston

College; one dated October 25, 2016 and the second one dated December 13, 2016. (Dkt. No. 216-2, Howitt Depo. at 265:10-16.) Dr. Howitt explained that because Gaston College did not initially evaluate the fabric longitudinally, which he thought was important, he directed them to conduct that test. (Id. at 265:16-18; 268:22-269:6.) While Dr. Howitt discussed the methodology with Leslie Berryhill, the Gaston College expert in the field, he did not remember the standards she mentioned and did not know what standards were used to determine their methodologies. (Id. at 265:18-21; 268:3-12.) He stated he relied on Leslie Berryhill to determine the appropriate methodology and relied on her to follow that methodology. (Id. at 268:13-18.) He was also not present for the testing. (Id. at 268:19-21.) But he had discussions with Berryhill about her testing such as staining the sample. (Id. at 275: 4-11.) It also appears that he was involved in the testing process as he requested a second report to evaluate the fabric longitudinally, and in an email communication, Berryhill was getting cross with Dr. Howitt as it appears he was asking her do more than she thought was required. (Id. at 276:3-8.)

While Dr. Howitt was not present of the testing, he was involved in the process as he had communications with Berryhill, questioned her, and directed further testing to be done. Dr. Howitt was familiar with the methods and reasons underlying Gaston College's conclusions. Even if he was not familiar with the underlying test, as an expert, Dr Howitt is allowed to rely on otherwise inadmissible hearsay as a basis to explain his conclusions. See Fed. R. Evid. 703.

Lastly, he sent the swatch to McCrone Associates, Inc. ("McCrone") with instructions to identify the fiber content. (Dkt. No. 172-1, Howitt Decl ¶ 17.) Dr. Howitt testified that that since he was unable to get into the lab in Pleasanton to analyze the fabric using wave length dispersive spectroscopy, a senior person at that lab recommended McCrone. (Dkt. No. 216-2, Howitt Depo. at 276:20-277:6.) So he asked McCrone to conduct the test. (Id.)

McCrone used microscopic, SEM and energy-dispersive x-ray spectrometry.

(Dkt. No. 172-1, Howitt Decl ¶ 17.) According to McCrone, SEM and EDS analysis confirmed the 100% cotton finding. (Id.) McCrone also conducted a PLM refractive index determination. (Dkt. No. 216-2, Howitt Depo. at 279:22-25.) He asked McCrone to do PLM according to their in-house protocols because McCrone "wrote the book on PLM." (Id. at 278:9-16; 294:25-295:2-3.) Dr. Howitt explained that all the standards for analyzing fibers originate from McCrone's book and "if anybody is going to follow the procedure, it's going to be McCrone." (Id. at 278:13-20.) Dr. Howitt was not present for any of the analysis. (Id. at 294:22-24.) However, McCrone was in communication with Dr. Howitt during the testing. For example, McCrone and Dr. Howitt had a discussion about looking for titanium. (Id. at 306:1-12.) McCrone also called him before they made the decision to snip 3 mm of the yarn. (Id. at 301:3-12.) At his deposition, Dr. Howitt was also able to answer counsel's questions about the bases of certain conclusions in McCrone's report. (Id. at 295:4-296:15.) Dr. Howitt also spent an extensive amount of time at his deposition explaining the McCrone Report. (Id. at 280-290.)

Contrary to Plaintiff's argument that the reliance on McCrone's report is not permissible because he had no knowledge about the beam current, length of exposure, specimen height, and the dead time of the particular detector for Exhibit 6, (see id. at 290:8-25), Rule 703 allows otherwise inadmissible evidence to be admissible if experts in the field would reasonably rely on these kinds of facts or data in forming an opinion. Here, Plaintiff has not demonstrated that experts in the field would not reasonably rely on these tests to determine the composition of a fabric. Any challenges Plaintiff has concerning the underlying data can be raised at trial.

Here, contrary to Plaintiff's argument, Dr. Howitt is not acting as a mouthpiece for these independent laboratory testing in a different specialty. He has specialty knowledge and expertise in the testing methods used by these laboratories. (Dkt. No. 172-1, Howitt Decl. ¶ 3.) Dr. Howitt's deposition reveals that he is

intimately familiar with the techniques used by these three laboratories. He directed them to conduct the testing and was in communication with them during the testing. McCrone is the leading laboratory that "wrote the book" on fiber analysis. See O2 Micro Int'l Ltd. v. Monolithic Power Sys., Inc., 420 F. Supp. 2d 1070, 1088 (N.D. Cal. 2006) (expert testimony relying on tests performed by a third party was admissible as testing was performed according to methods commonly accepted in the industry, the expert directed what he wanted tested and how it should be tested, and the third party testing methodology was well-known).

Dr. Howitt may use the testing performed by the three laboratories as data to support his independent conclusion that the Shirt is 100% cotton. He testified that his opinion is based on his own testing of the Shirt, his extensive background in materials science, and taking the facts and data from these three independent laboratories, to explain and/or confirm his conclusion. (Id. at 314:6-11.)

Moreover, it is not disputed that experts in the field of fiber identification would reasonably rely on the facts or data of the three laboratories in forming an opinion. The laboratories conducted fiber identification tests recognized and relied upon by experts in the field, including those performed by Plaintiff's experts. See Green v. Allstate Ins. Co., No. 11–cv–00210 JWS, 2012 WL 3237166, at *2 (D. Alaska Aug. 7, 2012) (expert could present opinion of chemist who conducted independent testing of fire debris samples as the data would be reasonably relied upon by experts in the field of fire investigation). Therefore, Dr. Howitt's reliance on the results of three laboratories conducting fiber identification was not improper and the challenged testimony is admissible. Any challenges raised by Plaintiff as to the specific challenges to whether Dr. Howitt understood the underlying methodologies and source or standard may be raised at trial.

Based on the above, the Court DENIES Plaintiff's motion to exclude the testimony of Dr. Howitt based on his qualifications and the testing he performed.

However, the Court GRANTS Plaintiff's motion to exclude a limited portion

of his testimony. Plaintiff argues that Dr. Howitt should be precluded from asserting that the exemplar shirts he purchased were almost identical to the Shirt and were manufactured by Ralph Lauren Corporation ("RLC") as the exemplar shirts were not manufactured by RLC. Defendants do not oppose or address this issue in their response.

Dr. Howitt obtained 8-10 Ralph Lauren brand gingham shirts on eBay to compare their characteristic construction to the Shirt. He concluded that two of the exemplar shirts he purchased were nearly identical to the Shirt, (Dkt. No. 152-5, Weitz Decl., Ex. 14, Howitt Depo.at 16:4-18:3), and subsequently concluded that two exemplar shirts, although labeled with different serial numbers, were manufactured by Ralph Lauren Corporation. (Id. at 159:1-161:8.)

The two matching exemplar shirts were labeled RN0103446/CA16190 and RN 19672. Plaintiff's search of the RN and CA numbers in the Federal Trade Commission's online database revealed that two exemplar shirts were manufactured by RL Childrenswear LLC, and Oxford Industries, who was the predecessor licensee to Schwab Defendants, and not by RLC. (Dkt. No. 152-2, Szeto Decl. ¶¶ 2, 4.) However, one of the other exemplar shirts, labeled RN 41381, was manufactured by Ralph Lauren Corporation. (Id. ¶ 3.)

It is not clear from the cited deposition testimony of Dr. Howitt whether the two matching exemplar shirts he references are RN0103446/CA 16190 and RN 19672, which were manufactured by RL Childrenswear LLC and Oxford Industries, or whether one of the matching exemplar shirts also includes RN 41381, a shirt manufactured by RLC. As such, the Court GRANTS in part Plaintiff's motion to exclude Dr. Howitt from asserting that all, except one exemplar shirt, RN 41381, were manufactured by RLC.

In sum, the Court GRANTS in part and DENIES in part Plaintiff's motion to exclude Dr. Howitt's testimony.

C. Defendants' Motion to Exclude Expert Testimony of Dr. David M. Hall,

Dr. David Hall, Ph.D., P.E., F.T.I., F.S.D.C., is Plaintiff's designated expert on fiber and textiles and is expected to testify regarding the fiber content of the Shirt, flammability characteristics and burning behavior of clothing and fibers. (Dkt. No. 128 at 16.)

Defendants move to exclude Dr. Hall's testimony that "(1) the Shirt's fabric "was made from a blend of no more than 90% cotton, at least 4-5% nylon and at least 5-6% rayon"; (2) the subject shirt was comprised of fabric that was constructed of core-spun, low-quality immature cotton; (3) the rayon and nylon were intentionally added as a component part of each yarn to strengthen the lower cost, lower-quality cotton, increasing the profits of the manufacturer; and (4) plaintiff's injuries "would have been much less severe if he had been wearing a 100% cotton shirt." (Dkt. No. 168-3, Weitz Decl., Ex. 2, Hall Decl. ¶¶ 6, 7, 15.) Plaintiff argues that Dr. Hall should not be excluded because he has over sixty years of practical, academic and industry experience in fiber identification and in flammability characteristics and burning behavior of textiles and fibers.

Dr. Hall was a Professor of Textile Engineering and Material Engineering at Auburn University until his retirement in 1995. (Dkt. No. 168-3, Weitz Decl., Ex. 2, Hall Decl. ¶ 2.) He taught undergraduate and graduate level classes in all areas of "Textile Chemistry including, Preparation Dyeing and Finishing, Textile Sizing, Chemical Testing Methods, Natural and Man Made Fibers as well as laundry practices for consumer textiles." (Id. ¶ 3.) He received numerous research grants and published the results widely in the area of "textile technology, specifically in the use of Scanning Electron Microscopy and Energy Dispersive Analysis for problem solving applications." (Id. ¶ 4.) He has published over 45 refereed research papers and other "state-of-the-art" type papers, presented over 75 technical/research papers to different organizations in the areas of textile science and technology, has been a reviewer of several peer journals, holds 35 issued U.S. patents in the areas of textile science or applied textile technology, and has

substantial experience in textile forensics and finally, performed analyses and/or tests for over 200 textile related firms. (Id.) Prior to his career, he worked in his family's cotton fields of Alabama. (Dkt. No. 168-19, Weitz Decl., Ex. 18, Hall Decl. ¶ 2.) He even created a "smart cotton" process that creates a stronger fiber at significantly lower cost than traditional processes and received the 2015 Award by the Research & Design Magazine's coveted Top Patents. (Id. ¶ 3.) Dr. Hall has a similar understanding of rayon and nylon since he worked at companies that manufactured rayon and nylon. (Id. ¶ 4.)

Defendants argue that Dr. Hall's fiber identification based on SEM is inherently unreliable since he is not a SEM expert and relied on SEM images produced from testing performed by a colleague. Plaintiff responds that while Dr. Hall is not a SEM operator, he is an expert in analyzing information obtained from a SEM. (Dkt. No. 168-2, Weitz Decl., Ex. 1, Hall Depo. at 27:13-23[6].) Moreover, in this case, Dr. Hall worked side by side with Dr. Michael Miller, who performed the SEM, and the samples were prepared using Dr. Hall's published technique. (Id. at 24:15-25:4; 84:18-86:14.) Further, Dr. Hall's numerous peer-reviewed publications show that he is an expert in analyzing SEM results. (Id., Ex. 3, Hall CV.)

Under Rule 703, an expert may rely on tests not performed by him if "experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the subject." Fed. R. Evid. 703. Defendants acknowledge that SEM is one method used to identify fiber and SEM is, in fact, a method that experts in the field of fiber identification rely on in forming an opinion. Defendants' argument is without merit as Dr. Hall can rely on the SEM testing performed by Dr. Miller since it is a test reasonably relied on by experts in the field of fiber identification. See Fed. R. Evid. 703. Moreover, Dr. Hall has extensive experience in interpreting and analyzing SEM data.

[6] Deposition page numbers are based on the pagination of the deposition transcript.

Defendants next contend that "Dr. Hall's testimony regarding his fiber identification analysis should be excluded for the following reasons: (1) Dr. Hall's analysis was limited to only looking at the fiber's cross-sections through SEM and not examining the fibers longitudinally; (2) Dr. Hall improperly conducted the SEM procedure and his opinion that the fabric was 'core spun' is not supported; and (3) Dr. Hall failed to comply with his own procedure of following his SEM analysis with other confirmatory tests, such as 'wet chemistry' testing." (Dkt. No. 148 at 11-12.) These arguments concern alleged faults in using a methodology and go to the weight of Dr. Hall's testimony and not to admissibility. See Kennedy, 161 F.3d at 1231. These challenges may be made at trial.

Moreover, Defendants challenge Dr. Hall's burn testing by placing exemplar shirts on a mannequin and setting them on fire with a lighter as lacking scientific value. First, they assert that Dr. Hall is not a flammability expert and he seeks to testify concerning the flammability characteristics of the Shirt. Next, Defendants contend that the testing is inherently unreliable because the Shirt should have been conditioned on the mannequin the way it was conditioned on Plaintiff at the time it caught fire and the shirt should have been lit the same way Plaintiff's shirt was lit on fire. Plaintiff dispute Defendants' criticisms of Dr. Hall's mannequin burn demonstration.

Dr. Hall obtained an exemplar red-and-white Ralph Lauren brand short-sleeved, boys' gingham shirts, labeled 100% cotton from a department store. The shirt consisted of a blend of cotton, nylon and rayon although the exact percentage composition was not known. (Dkt. No. 168-1, Weitz Decl., Ex. 1, Dr. Hall Depo. at 319:16-23.) Dr. Hall placed the shirts on a mannequin in an indoor burn facility and ignited the bottom corner of the fabric to demonstrate how clothing fires progress in real-world conditions.[7] Plaintiff argues that it was not necessary to match the exact

[7] Plaintiff cites to pages of the deposition transcript of Dr. Hall; however, all pages

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conditions that existed on the day that Plaintiff was injured because Dr. Hall was presenting a general demonstration of garment flammability and fire behavior and was not attempting to quantify Plaintiff's experience. Dr. Hall was only presenting a general demonstration of garment flammability and fire behavior concerning a blended fibers similar to Plaintiff's Shirt, and not that the burn demonstration is a re-enactment of what happened on the day of the incident.

The Court finds that Plaintiff has failed to demonstrate that the burn testing is relevant or reliable as to whether Plaintiff's alleged blended shirt burned differently than a 100% cotton shirt. Dr. Hall does not know the percentage blend of the exemplar shirts. His deposition transcript that has been provided to the Court is missing the pages where Dr. Hall testified that the exemplar shirts were made from a blend of cotton, nylon and rayon although they were labeled 100% cotton. The parties have not provided Dr. Hall's conclusions concerning the burn testing. In addition, it does not appear there was a comparison with burning a 100% cotton shirt. Dr. Hall's testing lacks sufficient information to establish comparators that are reliable and will assist the jury. Moreover, any probative value of the test is outweighed by the likelihood of confusing the issues at trial and producing unfair prejudice. Based on the state of the record, the Court excludes Dr. Hall's testimony on burn testing on the mannequins.

Furthermore, Defendants argue that Dr. Hall should be precluded from opining or speculating on their purported reasons for using certain materials. Dr. Hall testified that the addition of rayon and nylon would have been the result of a conscious decision by the manufacturer to reduce overall production costs. Because

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FOOTNOTE CONTINUED FROM PREVIOUS PAGE

cited to his deposition are not in the record as the deposition transcript stops at page 329. (Dkt. No. 168 at 17; Dkt. No. 168-2 at 157.) The supported deposition testimony asserting that the exemplar shirts consisted of a blend of cotton, nylon and rayon is not in the record. (Dkt. No. 168 at 17 (citing to Dr. Hall's deposition transcript at 330:1-7; 330:13-331:5; 331:11-332:3; 332:9-14).)

much of the cotton in the Shirt was immature, making it weaker than higher quality cotton, use of rayon and nylon strengthened the low-quality cotton yarn. (Dkt. No., Dr. Hall Decl. ¶ 15.) Plaintiff responds that Dr. Hall is a textile engineer with extensive experience developing new fibers, textiles, finishes, and manufacturing processes. While he has not conducted the exact cost savings from the addition of rayon and nylon, his experiences provide sufficient information for him to reliably opine on the manufacturer's motives for yarn design. Plaintiff argues it would help the jury determine liability if it can understand why and how nylon and rayon would be blended with cotton. While Dr. Hall has extensive background, experience, and knowledge in the textile industry, including the cotton, nylon and rayon industries, the Court concludes that Defendants' motive for blending nylon and rayon with cotton is marginally relevant on the issue of liability. Defendants' motive for blending does not show whether the Shirt was 100% cotton or how it affected flammability. What little probative value that it possesses to prove liability is outweighed by confusion of the issues. This evidence will be excluded at the trial on liability and damages. The Court will DEFER ruling on the motion to exclude this evidence at a punitive damages trial, in the event there is a jury finding of liability.

Accordingly, the Court GRANTS in part and DENIES in part Defendants' motion to exclude the testimony of Dr. Hall.

D. Defendants' Motion to Exclude Expert Testimony of Dr. David Xu

Dr. David Xu, Ph.D., P.E. is Plaintiff's designated expert in materials and is expected to testify regarding fiber content, flammability characteristics and burning behavior of the Shirt, clothing, and fibers. (Dkt. No. 128 at 16.)

Defendants move to exclude Dr. Xu's testimony that the "results of Scanning Electron Microscopy ("SEM") and Fourier transform infrared spectroscopy ("FTIR") tests each showed the Subject Shirt was composed of approximately ~90% cotton, 4-5% nylon, and 5-6% rayon." (Dkt. No. 167-4, Xu Decl. ¶ 3.)

First, Defendants argue that Dr. Xu is not qualified to opine on fiber identification and on flammability. As to fiber identification, Defendants describe Dr. Xu's experience with fiber identification as having taken a course in college that discussed fiber identification which was about half an hour to an hour long; he has been retained as an expert in four to five cases relating to fiber identification of apparel; he conducted two research projects for Plaintiff's former attorney; he visited Dr. Hall twice; and he visited a textile plant in Alabama and two plants in Guatemala. Plaintiff argues that Dr. Xu's background as a Professional Engineer in addition to his efforts of gaining expertise in the field of textiles and fibers qualify him to testify on fiber identification. Specifically, Dr. Xu spent three days in Alabama learning fiber identification from Dr. David Hall, (separately from this case), explored yarn manufacturing facilities in the U.S. and abroad, (separately from the case), and learned from other fiber identification experts and engineers, (separately from this case). (Dkt. No. 167-10, Weitz Decl., Ex. 9, Xu Depo. at 77:1-19; Dkt. No. 167-11, Weitz Decl., Ex. 10, Xu Depo. at 306:4-24; 307:7-22; 348:11-349:10.) At the cotton plant in Alabama, Dr. Xu talked to the plant manager for an hour or two about the process for manufacturing cotton yarns from start to finish. (Id. at 307:15-22;308:2-18.) He also visited two textile plants in Guatemala and spoke to the textile engineer about their process. (Id. at 309:7-310:15.)

As to textile flammability, Defendants argue that Dr. Xu testified that while he talked a bit about flammability characteristics, he admits he is not the flammability expert and would not offer extensive amount of testimony on it. (Dkt. No. 149-2, Blackwell Decl., Ex. B., Dr. Xu Depo. at 212:8-13.) Based solely on these statements that Dr. Xu admitted he is not an expert in flammability expert, Defendants move to exclude his testimony. Plaintiff rebuts Defendants' argument that while he is not a fire science expert, he understands fire science and has some knowledge of burns since he has worked on many scalding cases involving hot water. (Dkt. No. 167-11, Weitz Decl., Ex. 10, Dr. Xu Depo. at 323:17-324:4.)

Moreover, building upon his qualifications as a professional engineer and a doctor of materials engineering, he worked with Dr. Marcelo Hirschler, who was an expert witness for Macy's and Ralph Lauren in this case, and discussed her and Dr. Zicherman's published research in the areas of textile flammability. His specialized knowledge comes from his "understanding of fire science, literature review, Dr. Hall's textbook, and discussions with Drs. Hall, Hirschler, and Zicherman." (Dkt. No. 167 at 8.)

Rule 702 requires that an expert have specialized "knowledge, skill, experience, training, or education." Fed. R. Evid. 702. "A witness can qualify as an expert through practical experience in a particular field, not just through academic training." Rogers, 922 F.2d at 1429.

> "Education" sufficient to qualify an expert may be formal, resulting in a degree or certification. "Education" also may be based on informal self-study or independent research. "Training" usually means on the job instruction or work-related classes. "Skill" is a specialized aptitude developed as a result of significant involvement with a specific subject. "Experience" may qualify a witness as an expert so long as it is obtained in a practical context.

21 Charles Alan Wright & Victor James Gold, Federal Practice and Procedure: Federal Rule of Evidence § 6264.1 (2d ed. 1997). Here, Dr. Xu, through self-study and independent research, has the education and experience of an expert as defined under Rule 702. Moreover, as noted above, any gaps in a witness' qualifications or knowledge or lack of specialization go to the weight of his testimony and not admissibility. See Abarca, 761 F. Supp. 2d at 1028; In re Silicone Gel Breast Implants, Prods. Liab. Litig., 318 F. Supp. at 889.

Dr. Xu, Ph.D., P.E., has a Bachelor of Science, Master of Science and Ph.D. in Material Science and Engineering From U.C. Berkeley. (Dkt. No. 167-4, Weitz Decl., Ex. 4, Dr. Xu's CV.) He is a Professional Engineer in chemical, materials, and mechanical engineering, with expertise in compositional analysis, electron

microscopy, failure analysis, polymers, chemical properties, structures and bonding. (Id.) With this background, he conducted self-study and research in the areas of fiber identification and flammability characteristics. Any challenges to the sufficiency of his qualifications to testify in these areas should be raised at trial and not in a motion to exclude. See Abarca, 761 F. Supp. 2d at 1028; In re Silicone Gel Breast Implants, Prods. Liab. Litig., 318 F. Supp. at 889. Similarly, Defendants may challenge Dr. Xu's testimony on flammability as cumulative to the extent that it merely repeats the testimony of the fabric flammability expert.

Next, Defendants contend that Dr. Xu's opinion are not reliable and based on questionable methodology. Essentially, Defendants raise numerous issues and faults with Dr. Xu's methodology. (Dkt. No. 149 at 17-23.) As discussed above, any faults in the methodology employed go to the weight and not admissibility of the testimony. See Kennedy, 161 F.3d at 1231. Thus, the Court DENIES Defendants' motion to exclude the expert testimony of Dr. Xu.[8]

E. Defendants' Motion to Preclude Testimony of Dr. Michel F. Brones

Michel Brones, M.D. is Plaintiff's designated expert on plastic and reconstructive surgery and will testify concerning the nature and extent of Plaintiff's burn injuries, the reasonableness and necessity of his medical treatment to date, future treatment and Plaintiff's prognosis. (Dkt. No. 128 at 16.)

Defendants move to exclude testimony of Dr. Brones that "(1) Plaintiff's burns were of the depth and pattern that to him indicate the textile material plaintiff was wearing was a mixture of cotton and another material . . . ; (2) the type of burns plaintiff sustained as to the depth, location and uniformity are not consistent with

[8] In their reply, Defendants argue, for the first time, that Dr. Xu's opinion as to the intentional addition of nylon and rayon to the Shirt is speculation. (Dkt. No. 177 at 7.) The Court declines to address an issue raised for the first time in a reply brief. See State of Nev. v. Watkins, 914 F.2d 1545, 1560 (9th Cir.1990) ("[Parties] cannot raise a new issue for the first time in their reply briefs."); Ass'n of Irritated Residents v. C & R Vanderham Dairy, 435 F. Supp. 2d 1078, 1089 (E.D. Cal. 2006) ("It is inappropriate to consider arguments raised for the first time in a reply brief.").

100% cotton fabric and are much more consistent with a mixed-blend fabric . . . ; and (3) blended fabric shirts cause uniform burns because the textile materials stick to the body, as opposed to burning quickly and disintegrating . . . ." (Dkt. No. 147 at 7-8.) "Dr. Brones also testified the blend of Plaintiff's shirt caused 60-65% more damage than a 100% cotton shirt would have caused." (Id. at 8.)

First, Defendants seek exclusion of Dr. Brones' testimony concerning fiber identification and flammability as he is not qualified to testify about materials identification or the flammability characteristics of the Shirt. They claim his knowledge of treating burn victims does not qualify him as a fiber identification or flammability expert. Plaintiff opposes arguing Dr. Brones is well qualified to opine on the characteristics of the Shirt based on his knowledge and experience of having treated thousands of burn victims.

Federal Rule of Evidence 702 requires that a testifying expert be "qualified as an expert by knowledge, skill, experience, training, or education." Fed. R. Evid. 702. "[T]he use of the disjunctive indicates that a witness may be qualified as an expert on any one of the five listed grounds." Friendship Heights Assoc. v. Vlastimil Koubek, 785 F.2d 1154, 1159 (4th Cir. 1986). The threshold for qualification is low; a minimal foundation of knowledge, skill, and experience suffices. Hangarter, 373 F.3d at 1015-16; see also Thomas, 42 F.3d at 1269. Moreover, "lack of particularized expertise goes to the weight accorded her testimony, not to the admissibility of her opinion as an expert." United States v. Garcia, 7 F.3d 885, 889 (9th Cir. 1993). Furthermore, to testify as an expert, an individual "need not be officially credentialed in the specific matter under dispute." Massok v. Keller Indus., Inc., 147 Fed. App'x 651, 656 (9th Cir. 2005) (citing Garcia, 7 F.3d at 889-90).

Dr. Brones is a board-certified plastic and reconstructive surgeon who specializes in burn injuries. (Dkt. No. 165-2, Sizemore Decl., Ex. 1, Brones Depo. at 24:18-24; id., Ex. 2.) He has treated a wide array of burn injuries including

flame, scalding, electrical, chemical, lighting, contact burns, and x-ray burns. (Id., Ex. 1, Brones Depo. at 24:12-17.) From 1981 to 1998, he worked as a burn surgeon at Grossman Burn Center, which is the largest and busiest private burn facility in the United States. (Id., Ex. 2; id., Ex. 1, Brones Depo. at 70:18-20.) He saw thousands of patients with textile burns and would analyze the nature of the materials they were wearing and look for burn patterns. (Id., Ex. 1, Brones Depo. at 70:18-71:7.) He was able to distinguish whether the materials were synthetic, natural, pure cotton or a blend, and after treating thousands of patients, he learned to identify, by the pattern of the burn, the most likely textile caused the burn. (Id.) Dr. Brones has also served as an expert witness in more than one thousand cases offering testimony on topics including the "nature, extent, and causation of burn injuries, the reasonableness and necessity of claimed medical treatment and bills, and the reasonableness and necessity of future treatment." (Dkt. No. 165-5, Brones Decl. ¶ 4.) In addition, has testified in four cases "opining on the interplay between characteristics of materials and textiles, burn patterns, and subsequent medical treatment." (Id. ¶ 5.)

Dr. Brones' experience and training in treating thousands of textile burn injuries and his learned ability to distinguish burn patterns based on the materials the patients were wearing provide more than a minimal foundation that make him qualified to testify about the composition of the fabric worn by Plaintiff based on the burn patterns on his body. Any issues Defendants have with Dr. Brones' qualifications can be challenged through cross examination. See Abarca, 761 F. Supp. 2d at 1028. Moreover, any alleged contradictory statements Dr. Brones made during the litigation may affect credibility determinations that go to the weight, not admissibility, of the evidence and can be challenged at trial.

Second, Defendants argue that Dr. Brones' opinions concerning fiber analysis and identification are unreliable because he made his conclusion based on a highly pixelated and blurry photograph taken over 12 years ago on the date of the incident.

(Dkt. No. 147-5, Blackwell Decl., Ex. C.) Defendants' retained dermatologist expert, Dr. Edward Ross, testified that that he would question whether one can tell from an ICU burn picture the exact fiber type. (Dkt. No. 147-6, Blackwell Decl., Ex. E, Ross Depo. at 67:10-68:25.) Plaintiff responds that Defendants mischaracterize Dr. Brones' methodology as he did not rely solely on the photograph but also relied on Plaintiff's medical records, and Dr. Brones' training, education and experience as a burn surgeon. Moreover, he challenges Dr. Ross' opinion as he is a dermatologist and lacks the same training and experience as Dr. Brones. Defendants' argument concerning faults in Dr. Brones' methodology raise questions that address the weight, not admissibility of his testimony. See Kennedy, 161 F.3d at 1231.

Next, Defendants argue that Dr. Brones' opinion that the uniformity of the burn pattern could only occur if the shirt was a cotton blend, and not 100% cotton is unreliable because he failed to consider alternatives to his opinion. Plaintiff contends that Dr. Brones discounted obvious alternatives and explained the foundation of his opinions and why other conceivable causes were excludable. (Dkt. No. 165-2, Sizemore Decl., Ex. 1, Brones Depo. at 66:10-68:11.) Moreover, he argues that the existence of causes goes to the weight, not admissibility of the opinion.

Generally, "an expert need not rule out every potential cause in order to satisfy Daubert," as long as the expert's testimony "address[es] obvious alternative causes and provide[s] a reasonable explanation for dismissing specific alternate factors identified by the defendant." In re Fosamax Products Liab. Litig., 647 F. Supp. 2d 265, 278 (S.D.N.Y. 2009). It is not required that experts eliminate all other possible causes of a condition for the expert's testimony to be reliable, but only that the proposed cause "be a substantial causative factor." Messick v. Novartis Pharms. Corp., 747 F.3d 1193, 1199 (9th Cir. 2014). Nonetheless, a failure to address alternatives causes to the pattern and depth of the burn is a subject

proper for cross-examination, and not admissibility. See Stanley v. Novartis Pharms. Corp., 11 F. Supp. 3d 987, 1001 (C.D. Cal. 2014) ("to the extent Defendant argues that [the doctor] did not adequately rule out additional factors, this is a credibility determination that goes to the weight . . . of his opinions.") (citing cases); see also Ambrosini v. Labarraque, 101 F.3d 129, 140 (D.C. Cir. 1996).

The Court concludes that Dr. Brones is qualified to testify and his experience, knowledge, education concerning regarding burn injuries and materials are beyond the common knowledge of the average layman and would assist the trier of fact in determining the type of fabric Plaintiff was wearing on the day of the incident. However, based on the record, the Court finds that Dr. Brones' opinion that the blend of the Shirt caused 60-65% more damage is speculative and unsupported by any reliable methodology.

The Court GRANTS in part and DENIES in part Defendants' motion to exclude the expert testimony of Dr. Brones.

F. Defendants' Motion to Exclude Expert Testimony of Andrew Ellison

Plaintiff's designated forensic engineer, Andrew Ellison, P.E., is expected to testify about flammability characteristics and burning behavior of textiles and fabrics. (Dkt. No. 128 at 16.)

Defendants seek to exclude Mr. Ellison's testimony on human burn injuries on the basis that he is not qualified since he has no training, education or experience in the field of human burn injuries. Responding, Plaintiff argues that Mr. Ellison is qualified to testify on human burn injuries based on his extensive experience in the field of human skin burns resulting from thermal heat transfer involving a textile medium. Mr. Ellison is being offered to testify concerning the field of forensic engineering as it "relates to textiles and fabrics, the thermal transfer characteristics of those materials when exposed to fire, and the impact on human skin as a result of that thermal transfer", (Dkt. No. 164 at 6), and not as a medical expert to opine on Plaintiff's burn injuries.

Ellison graduated from Worcester Polytechnic Institute with a Bachelor of Science degree in Mechanical Engineering and a Master of Science degree in Fire Protection Engineering. (Dkt. No. 156-2, Irving Decl., Ex. 2, Ellison Decl. ¶ 3.) He is a licensed professional engineer, trained and experienced in performing fire origin and cause investigations, and is a Certified Fire and Explosion Investigator. (Dkt. No. 164-3, Sizemore Decl., Ex. 2.) He worked with the U.S. Navy performing research and testing on uniforms, protective clothing and equipment of war fighters, and the majority of his work focused on flammability and thermal protective personal protective clothing. (Dkt. No. 156-3, Irving Decl., Ex. 2, Ellison Decl. ¶ 4.) He also continued developing test methods for fabrics and garments under fire assault. (Id.) Since 2007, he has been a consultant on fire cause and origin, mechanical & fire protection engineering, human skin burns, and fabric flammability. (Id. ¶ 5.) He also published numerous papers on burning behavior and flame spread. (Id. ¶ 6.) Furthermore, he has experience in textile flammability testing, thermal protective properties of clothing items and the causes of thermal burn injuries. (Dkt. No. 164-5, Sizemore Decl., Ex. 4.) Finally, he has been a member of the Technical Committee of Wildland Firefighting Protective Clothing and Equipment and a member of the American Society of Testing and Materials, which promulgates standards for consumer clothing. (Dkt. No. 164-8, Sizemore Decl., Ex. 7, Ellison Depo. at 69:14-70:4.)

Defendants assert that Mr. Ellison has never specifically published on the subject of burn injuries or the relationship between clothing and burn injures; has no formal education on burn injuries, has never been retained as an expert on burn injuries and has no firsthand experience in treating burn injuries.[9] However, "Rule

[9] Defendants also question Mr. Ellison's qualification as a human burn injury expert by noting that prior to his involvement in the case, his CV did not mention that his area of specialty was in the area of burn injuries. The record and testimony of Mr. Ellison reveal the contrary. Mr. Ellison was disclosed as an expert witness on March 22, 2016. (Dkt. No. 156-2, Irving Decl., Ex. 1.) Mr. Ellison testified that his January 2016 CV, which was not drafted for purposes of this litigation,

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702 is broadly phrased and intended to embrace more than a narrow definition of qualified expert . . . ." Thomas, 42 F.3d at 1269. Moreover, "[g]aps in an expert witness's qualifications or knowledge generally go to the weight of the witness's testimony, not its admissibility," Abarca, 761 F. Supp. 2d at 1028 (quoting Robinson, 447 F.3d at 1100).

Mr. Ellison has extensive education, experience and knowledge in the area he is expected to testify which is the field of forensic engineering as it "relates to textiles and fabrics, the thermal transfer characteristics of those materials when exposed to fire, and the impact on human skin as a result of that thermal transfer." (See Dkt. No. 164 at 6.) The Court concludes Mr. Ellison meets the broad definition of a qualified expert under Rule 702. Any concerns Defendants have concerning his qualifications can be raised on cross-examination. The Court DENIES Plaintiff's motion to exclude the expert testimony of Andrew Ellison as unqualified.

G. Defendants' Motion to Exclude Expert Testimony of Paul Schwartzman

Plaintiff's designated psychology expert, Paul Schwartzman, M.S., D.A.P.A., L.M.H.C., is a licensed mental health counselor. He intends to offer expert testimony on "child fire play" and the "emotional journey" of a burn victim, and Plaintiff's injuries. (Dkt. No. 128 at 16.)

Defendants seek to exclude Mr. Schwartzman's testimony on "child fire play" as not scientific, technical or other specialized knowledge, and exclude the

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states he specializes in human burn injuries while his later CV dated September 2016, when Ellison was already designated as an expert in this case, has no mention that he specializes in human burn injuries. (Dkt. No. 156-5, Irving Decl., Ex. 4, Ellison Depo. at 22:9-24:12.) Defendants' supporting documents do not support their argument. However, in opposition, Plaintiff provides Mr. Ellison's prior CVs from August 2008 and August 2010 which do not reference his expertise in human skin burns; however, the removal of that area of expertise was due to a change in employment and not based on his training education and experience over the past years in the area of human skin burns. (Id. at 24:9-12.)

"emotional journey" testimony as not previously disclosed and not based on sufficient facts or data. Plaintiff argues that Mr. Schwartzman's opinions are relevant and based on specialized knowledge and sufficient facts or data.

1. Emotional Journey

First, Defendants argue that Plaintiff failed to disclose Mr. Schwartzman's proposed expert opinion on "emotional journey" prior to his deposition. The expert witness disclosure states that he would be an expert in "child fire play and fire setting" and Plaintiff did not provide any notice or supplemental notice before his deposition that he would be testifying on Plaintiff's "emotional journey" from his burn injury in 2005 to the present. They also argue that Plaintiff never provided a report summarizing his expert opinions.

In response, Plaintiff argues that he sufficiently disclosed that he would testify concerning the emotional journey of burn victims as the disclosures were broadly written and integrally related to his "child fire play" testimony. However, if the Court concludes that the subject matter was not disclosed, any failure to disclose was harmless and did not prejudice Defendants.

First, it is to be noted that at defense counsel's suggestion, the parties agreed to waive the expert report disclosure requirement under Rule 26(a)(2)(b) as of March 3, 2016. (Dkt. No. 163-4, Sizemore Decl., Ex. 3 at 2-4.) Therefore, Defendants' argument Plaintiff did not provide an expert report is disingenuous. Plaintiffs' expert witness disclosures, disclosed on March 22, 2016, provided:

> Upon information and belief, Paul Schwartzman is an expert in child fire play and fire setting. . . . Mr. Schwartzman is expected to offer opinions on liability and causation which will include his findings, conclusions and opinions regarding the circumstances, incidence, and prevalence of child fire play at issue in this case. Mr. Schwartzman will offer testimony about his credentials and any opinions. He will also provide expert opinion and testimony on other topics for which he is qualified to render such opinions as those issues develop throughout the course of discovery and investigation, as well as developing

> opinions expected to be offered in rebuttal to other experts at the time of trial. Mr. Schwartzman's testimony will be based on his expertise, education, knowledge, skill, training, investigation, testing, and the discovery produced by Plaintiffs and Defendants in this case.

(Dkt. No. 163-3, Sizemore Decl., Ex. 2 at 4-5.)

The disclosure does not list the topic of "emotional journey", and Plaintiff's argument that there was a disclosure of emotional journey because there is overlap between child fire play and a burn victim's emotional journey is not persuasive. It is not disputed that Plaintiff did not provide a supplemental disclosure. Moreover, at Mr. Schwartzman's deposition, he indicated that Plaintiff's emotional journey was his primary purpose as an expert, indicating that he knew all along that he was to opine on Plaintiff's emotional journey, a topic that was not disclosed. (See Dkt. No. 150-3, Irving Decl., Ex. B, Schwartzman Depo. at 9:23-10:5 ("My understanding was [sic] the original role was to speak to the emotional journey of a child who suffers from a serious burn injury and what that subsequent journey is was my original understanding.") The Court concludes that Plaintiff failed to disclose emotional journey as a subject of expert opinion and the topic should be excluded.

However, at the hearing, Plaintiff argued that the subject of emotional journey was also being offered as rebuttal to Mr. Kalish's testimony of Plaintiff's claimed injury. Dr. Kalish was disclosed as a rebuttal expert, on April 26, 2016, to testify regarding child fire play and fire setting as well as opinions on causation and claimed injuries. (Dkt. No. 60.) Therefore, to the extent that the topic of emotional journey is raised by Dr. Kalish on Plaintiff's claimed injuries, Mr. Schwartzman may testify, on rebuttal, concerning Plaintiff's emotional journey.

Defendants also contend that the "emotional journey" testimony is not based on any "sufficient facts or data" because Mr. Schwartzman did not review Plaintiff's medical records but relied almost entirely on Plaintiff's uncorroborated recollection of events from his childhood and adolescence during that period. Defendants note

that Mr. Schwartzman only spent about seven to nine hours reviewing materials to prepare his testimony. (Dkt. No. 150-3, Irving Decl., Ex. B, Schwartzman Depo. at 23:23-24:1.) He solely reviewed Plaintiff's deposition, Plaintiff's father's deposition, and read a few technical depositions but could not recall the authors. (Id. at 22:7-18; 60:1-20[10].) He read Dr. Brones' report, looked at some photographs of Plaintiff's injuries, and spent "some hours" discussing the case with Plaintiff's counsel. (Id. at 22:18-23; 24:6-12.) He also had a 90 minute "Facetime" interview with Plaintiff. (Id. at 10:22-11:3.) They claim these efforts do not provide a sufficient basis to opine on Plaintiff's emotional health.

Mr. Schwartzman has a Bachelor of Art degree in Psychology and a Master of Science degree in Counseling from the University of Rochester. (Dkt. No. 163-2, Sizemore Decl., Ex. 1, Schwartzman CV.) His opinion is based on 35 years of experience counseling children and families, participating on boards and in organizations formed to support burn victims, and authoring numerous articles and handbooks about juvenile fire setting and prevention of such behaviors. (Id.) He also facilitated a support group for burn survivors and their families. (Dkt. No. 163-6, Schwartzman Decl. ¶ 4.) Half of his professional practice is comprised of counseling burn victims. (Dkt. No. 163-5, Sizemore Decl., Ex. 4, Schwartzman Depo. at 30:6-9.)

The Court concludes that the underlying data and basis of Mr. Schwartzman's opinion are sufficient to form an opinion. See United States v. Finley, 301 F.3d 1000, 1010-11 (9th Cir. 2002) (conducting psychological tests to rule out serous mental disorders, taking case history, interviewing the defendant's spouse for additional information and conducting a physical exam were sufficient reasons to form an opinion). In fact, Dr. Kalish, Defendant's expert, testified that 90 minutes Facetime with Plaintiff was sufficient time to interview Plaintiff. (Dkt. No. 162-8,

[10] Defendants cite to page 59:19-60:2; however, page 59 is not in the record. (Dkt. No. 150 at 9.)

Kalish Depo. at 57:5-21.) Moreover, any challenges that Mr. Schwartzman did not review Plaintiff's entire medical record goes to the weight, not admissibility of his testimony.

The Court concludes that the emotional journey testimony during Plaintiff's case-in-chief should be excluded for Plaintiff's failure to disclose under Rule 26(a)(2)(C). However, to the extent that Dr. Kalish testifies and opens the door on the issue of emotional journey, Mr. Schwartzman may, on rebuttal, testify concerning Plaintiff's emotional journey.

2. Child Fire Play

Defendants argue that Mr. Schwartzman's opinion on "child fire play" is not relevant and will not assist the trier of fact. Specifically, they argue that the testimony that seven and eight year old children are curious about fire and experiment with fire, is common knowledge and does not require "scientific, technical or specialized knowledge." Defendants do not dispute the statement that some children experiment with fire and they are not claiming Jesus and Marcos intended to cause harm or damage when they used the lighter to light a plant. Therefore, his testimony regarding "child fire play" is not relevant. Plaintiff responds that Mr. Schwartzman's opinions are relevant to highly disputed facts including notice to Defendants as the corporate entity responsible for placing the product on the market and goes to whether the risk of harm was foreseeable. Plaintiff argues that Defendants knew or should have known of the likelihood that a child wearing the product would engage in fire play behavior and suffer injury as a result. Moreover, "child fire play" is relevant to Defendants' claims of negligent supervision against Plaintiff's parents as Plaintiff seeks to introduce Mr. Schwartzman's opinion on "child fire play" to demonstrate there were no negligent lapses in parental supervision.

Expert testimony is admissible under Rule 702 if the "subject matter at issue is beyond the common knowledge of the average layman . . . ." United States v.

Morales, 108 F.3d 1031, 1038 (9th Cir. 1997). Here, while child fire play, in general, may be common knowledge to the average layperson, the specifics as to child fire play, such as the percentage of kids who exhibit curiosity or motivation for child fire play are not, and such specialized knowledge would assist the trier of fact. Therefore, the Court concludes that Dr. Schwartzman's opinions on child fire play requires specialized knowledge.

Next, Defendants assert that child fire play is not relevant. At the hearing, Plaintiff argued that child fire play is relevant on the issue of foreseeability and whether Defendants had notice. A review of the proposed jury instruction shows that foreseeability is an element of the standard of care for negligence and also raised as an element of Defendants' affirmative defense of product misuse or modification. (Dkt. No. 212, Proposed Jury Instruction Nos. 1221, 1245.) Therefore, the Court concludes that child fire play is relevant to the ultimate issues in this case.

In sum, the Court DENIES Defendants' motion to exclude the testimony of Mr. Schwartzman on the topic of "child fire play" and GRANTS in part Defendants' motion to exclude the testimony of Mr. Schwartzman during Plaintiff's case in chief, but subject to being raised as rebuttal evidence to Dr. Kalish's testimony.

H. Cumulative or Duplicative

In Defendants' motions, they contend that the testimonies of Dr. Hall, Dr. Xu, Dr. Brones and Mr. Ellison are duplicative and cumulative, a waste of the jury's and the Court's time. According to Defendants, Dr. Xu and Dr. Hall have been retained to testify about fiber identification and flammability. Mr. Ellison was retained to opine as to flammability and human burn injuries and Dr. Brones, a plastic surgeon, will testify about materials identification and flammability characteristics of fabrics. All will opine that the Shirt was made from blended fabrics and consequently, more flammable than 100% cotton. They also argue their testimonies would be unduly prejudicial because the jury may lend more credibility to the expert's opinion if

multiple experts testify similarly.

In response, Plaintiff argues that each expert witness will offer opinions based on facts and data customarily relied upon in his own specialized field of discipline. According to Plaintiff, the experts contribute specialized knowledge from unique scientific perspective that, taken together, will ensure the jury's decision is based on a thorough understanding of these complex and multi-faceted issues. For example, Dr. Xu's testimony about materials engineering principles will assist the jury in understanding how fibers can be identified by molecular structure and address the results of his optical microscopy study of the Shirt as well as his use of the FTIR method while Dr. Hall will address fiber identification by morphology and discuss his SEM testing. Dr. Brones' opinion is narrow and offered "only for the purpose of explaining the nature and extent of Plaintiff's injuries and his opinions regarding Plaintiff's subsequent treatment." (Dkt. No. 165 at 9.) Lastly, Dr. Ellison does not identify the fiber blend but offers a fire scientist's perspective on how the blend of nylon, cotton and rayon increases the severity of the injuries compared to a 100% cotton.

Even if an expert is qualified under Rule 702, a court has broad discretion to exclude the testimony under Rule 403 if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, misleading the jury, or needless presentation of cumulative evidence. Fed. R. Evid. 403; Rogers v. Raymark Indus., Inc., 922 F.2d 1426, 1430 (9th Cir. 1991). "Rule 403's cumulative evidence provision does not prohibit the introduction of cumulative evidence; rather, it merely permits courts to exclude cumulative evidence when it has little incremental value." United States v. Miguel, 87 Fed. App'x 67, 68 (9th Cir. Jan. 30, 2004).

In this case, Dr. Brones will be testifying concerning Plaintiff's injuries and opinions about Plaintiff's future treatments. His testimony concerning the general statement that the Shirt was made of blended materials may overlap but is not

needlessly cumulative. Mr. Ellison will be testifying about flammability and burning behavior of different textiles and human burn injuries which are distinct from the topics of the other experts. While Dr. Xu and Dr. Hall reached the same conclusion that the Shirt contained 90% cotton, 4-5% nylon and 5-6% rayon, their methodologies and analyses in determining the fiber content of the Shirt differ. Interestingly, despite Defendants' argument concerning cumulative evidence, the Court notes that Defendants' expert, Dr. Howitt, will be relying on the testing performed by three different laboratories to determine the Shirt's composition using different methods of fiber identification. Moreover, since both parties will be relying on testing of the Shirt's composition by different methods, the Court concludes that Defendants' argument the they will be unduly prejudiced is without merit. The Court DENIES without prejudice Defendants' motion to exclude the testimonies of Dr. Hall, Dr. Xu, Dr. Brones and Mr. Ellison as cumulative. Defendants may object at trial on any available ground under the Federal Rules of Evidence.

I. Evidentiary Objections

Plaintiff filed objections to the declaration of Dr. David Howitt. (Dkt. No. 178-14.) The objections mirror the arguments raised in the Daubert motion concerning his qualifications and the testing he performed. As discussed and concluded above, the Court denied Plaintiff's motion to exclude the testimony of Dr. Howitt based on his qualifications and the testing he performed. Any challenges to Dr. Howitt's statements may be raised at trial. Therefore, the Court OVERRULES the evidentiary objections filed by Plaintiff.

Conclusion

Based on the reasoning above, the Court GRANTS in part and DENIES in part Plaintiff's motion to exclude the expert testimony of Dr. David Howitt. The Court also GRANTS in part and DENIES in part Defendants' motions to exclude the expert testimonies of Dr. David Hall, Dr. Michel Brones, and Mr. Schwartzman.

The Court further DENIES Defendants' motions to exclude the expert testimonies of Dr. David Xu and Andrew Ellison.

IT IS SO ORDERED.

DATED: NOVEMBER 29, 2017

Hon. Gonzalo P. Curiel
United States District Judge