CAUSE NO. 08-08056

MARCELA AND JOSE BUSTAMANTE, AS NEXT FRIENDS OF DANIELLA BUSTAMANTE, Plaintiffs, vs. JORGE FABIO LLAMAS-SOFORO, M.D.; JORGE FABIO LLAMAS-SOFORO, M.D., P.A., D/B/A EL PASO EYE CARE CENTER, ENRIQUE N. PONTE, JR., M.D., PEDIATRIX MEDICAL SERVICES, INC., AND PEDIATRIX MEDICAL GROUP, INC., Defendants.	§ § § § § § § § § § §	IN THE DISTRICT COURT OF DALLAS COUNTY, TEXAS 101st JUDICIAL DISTRICT

PLAINTIFFS' BRIEF ON THE ISSUE OF CAUSATION

TO THE HONORABLE COURT:

COME NOW PLAINTIFFS, Marcella and Jose Bustamante, as Next Friends of Daniella Bustamante, and file this Brief related to the Court's questions at the hearing on August 31, 2012, and respectfully show the Court as follows:

PRELIMINARY STATEMENT

Defendants argue that there is not sufficient evidence of causation. But, this is incorrect for the reasons explained herein. Plaintiffs also attach the trial testimony of Defense Expert Witness Graham Quinn, MD, which taken alone is sufficient to support the jury verdict.

First, the CRYO-ROP and ETROP studies provided by the defense are not the be all and end all of science in the area of ROP. Dr. Good cites and relies on other scientific evidence that backs up his opinions.

Dr. Good was clear throughout his testimony that Dr. Llamas and Dr. Ponte/Pediatrix caused unacceptable delays in diagnosis of Daniella Bustamante's ROP and failed to promptly

treat Daniella Bustamante's ROP, and Dr. Llamas failed to adequately treat the disease. Defendants attempt to require scientific evidence concerning what is, necessarily, a clinical judgment based on standard of care. There can never be a study that purposefully harms babies to produce the scientific *statistical* evidence of causation Defendants claim is necessary. Nor does the *Daubert* line of cases require one. As Dr. Good demonstrated with his testimony and other published peer-reviewed literature, defense counsel's use of study subset data is unreliable as an efficacy marker, as the sample size is too small to make any scientific conclusions, absent a statistically significant sample.

BACKGROUND

Daniella was born to Marcela and Jose Bustamante on May 19, 2005. Because she was premature and very small, Daniella was admitted directly to the neonatal intensive care unit at Del Sol Medical Center in El Paso, Texas. As part of the routine screening for a premature child, Daniella was scheduled to have an eye examination performed on July 11, 2005. However, Dr. Llamas examined her one week earlier on July 4, 2005. The eye examination was intended to detect whether a premature baby, at risk of Retinopathy of Prematurity ("ROP"), was beginning to develop that condition. The timing and accuracy of the exam, along with appropriate follow-up exams and treatment if necessary, are crucially important to treat the condition itself and preserve the vision for a premature baby.

Daniella's first eye exam was scheduled by Dr. Enrique Ponte, the Chief of Neonatology at Del Sol Medical Center and the nurses at Del Sol. Dr. Llamas conducted the first eye examination on July 4, 2005, when Daniella was approximately 30-32 weeks gestational age. The Joint Guidelines, adopted by the American Academy of Ophthalmologists and American Academy of Pediatrics, recommended that any follow-up examination be based upon the

findings of the original eye examination. Dr. Llamas's initial examination found "fetal fundi." While Dr. Llamas testified this finding meant incomplete vascularization in Zone II of the eye, Dr. Ponte testified he understood this finding to mean incomplete vascularization in Zone I. According to these guidelines, as well as other scientific literature, the follow-up examination should have taken place one to two weeks later and the timing of the follow-up examination is based on the results of the initial examination. It was the responsibility of both Dr. Llamas and Dr. Ponte to ensure timely follow-up examinations occurred. Timely follow-up examinations are necessary as ROP can progress very rapidly. The next examination did not take place until August 1, 2005, some four weeks after the initial examination.

On the August 1, 2005 examination, Dr. Llamas found Daniella to have threshold ROP and in urgent need of laser therapy. However, Dr. Llamas did not perform laser therapy on Daniella until August 4, 2005. Following the laser surgery, Daniella had a retinal detachment in her right eye and is now blind in her right eye with no vision. While the retina in her left eye did not detach, Daniella suffered scarring from the ROP and her visual acuity in the left eye has been damaged. She is legally blind in her left eye.

WILLIAM GOOD, M.D.

Dr. Good is a Senior Scientist at the Smith-Kettlewell Eye Research Institute in San Francisco, Clinical Professor of Ophthalmology at the University of California San Francisco, and Adjunct Professor of Pediatrics at Stanford University. He has a private practice in San Francisco, much of which is committed to ROP clinical care. Dr. Good has significant experience conducting original research analyzing the remedial impact of ablative therapy at various stages of ROP. Prior to his current position, Dr. Good was chairman of the department of ophthalmology at the University of Cincinnati medical school. He has published extensively

and has been involved in National Eye Institute clinical trials. Dr. Good was the committee chair of a study called the Early Treatment for Retinopathy of Prematurity Study in connection with the National Eye Institute. Dr. Good is a leader in the field of ROP. As Defendant Llamas' ophthalmology expert says, Dr. Good is a well qualified pediatric ophthalmologist and very well educated in the field of ROP.

"As a general rule, questions relating to the bases and sources of an expert's opinion affect the ***weight*** to be assigned that opinion rather than its ***admissibility*** and should be left for the jury's consideration." *United States v.14.38 Acres of Land, More or Less Situated in Leflore County*, 80 F.3d 1074, 1077 (5th Cir.1996) (emphasis added) (internal quotations and citations omitted). Indeed although the *Daubert* analysis is applied to ensure reliability of expert opinion, the test does ***not*** judge the accuracy of expert conclusions themselves. *Guy v. Crown Equip. Corp.*, 394 F.3d 320, 325 (5th Cir. 2004), *citing Daubert*. That function is left to the jury, upon consideration of the expert's testimony, the cross examination of him, and all other admissible evidence.

A post *Gammill*[1] case highlighting the development of Texas law on the subject is *Green v. Texas Workers' Compensation Ins. Facility.*[2] In that worker's comp case, the Austin court ultimately did not specifically reverse the trial court's exclusion of a treating physician's causation testimony, because it otherwise reversed the trial court on other issues and made it clear that admission of the same testimony would be upheld and should be admitted on remand. The court began:

> with the observation that medicine is as much art as science, and clinical medicine necessarily evolves from a process of trial and error. As such,

[1] *Gammill v. Jack Williams Chevrolet*, 972 S.W.2d 713,719 (Tex. 1998)

[2] *Green v. Texas Workers' Compensation Ins. Facility*, 993 S.W.2d 839 (Tex. App. – Austin 1999, pet. denied).

> clinical medicine has traditionally been granted some leeway in a determination of admissibility. A physician may not always be able to isolate to a mathematical certainty why human beings react in certain ways or why certain ailments respond to particular cures. This does not necessarily render such diagnoses and treatments ineffective or unreliable. Unfortunately, we have yet to reduce all of life's mysteries to a discrete set of scientific principles.[3]

Not only are clinicians afforded wider latitude in the bases of their opinion, *clinicians giving clinical testimony* in a medical case generally do not fit within a strict, scientific understanding of *Daubert* criteria at all. For example see *Merilis v. Lapreyrolerie*, 2000 WL 300920, (E.D. La. 2000), and *Mitchell v. United States*, 141 F.3d 8, 14-15 (1st Cir. 1998).

The evidence is clear that proper and timely treatment of ROP will not result in a retinal detachment. Scientific articles abound from ETROP to other case studies that show an 80-90% success rate of laser therapy for ROP not resulting in retinal detachment. Daniella had a retinal detachment in her right eye as a result of the improperly treated ROP.

1. Loss of Chance Not Relevant Here.

As the Supreme Court recently reaffirmed in *Columbia Rio Grande Healthcare, L.P. v. Hawley*, 284 S.W.3d 851, 860 (Tex. 2009), "[r]ecovery in a medical malpractice case requires proof to a reasonable medical probability that the injuries complained of were proximately caused by the negligence of a defendant." *Id. citing, inter alia, Park Place Hosp. v. Estate of Milo*, 909 S.W.2d 508, 511 (Tex.1995) and *Kramer v. Lewisville Mem'l Hosp.*, 858 S.W.2d 397, 400 (Tex.1993). Dr. Good has clearly provided testimony meeting this requirement.

The Fort Worth Court of Appeals has characterized *Kramer* and the cases applying its rule as "lost chance of survival or cure arguments," saying they are applicable only in a case where there is preexisting illnesses or injuries made the claimant's chance of avoiding the

[3] *Id.* at 844.

ultimate harm improbable even before the negligent conduct occurred. *Marvelli v. Alston* 100 S.W.3d 460, 481 (Tex. App. – Fort Worth 2003, pet denied) (expert testified that the risks of dislocation of artificial lens in eye surgery, where the dislocation caused ultimate loss of eye, ranged from high of two percent with the vertical insertion used by defendant to 'much less' with appropriate horizontal insertion). *Marvelli* looked at *relative risk*. In *Marvelli*, though the risk of harm, even without negligence, remained well below 50%, in the abstract, the defendant physician was held liable for the proximate result of the negligent placement of an artificial lens in that particular case. *In fact*, the eye doctor's negligence there led to the ultimate injury. It does here too.

As in this case, the portion of Plaintiff's expert testimony emphasized by Defendants "was generalized and not related to [Plaintiff's] situation." *Id.* at 481 "Dr. Jaffe repeatedly testified that vertical placement and repeated failures to place the implant horizontally caused the dislocations, which necessitated the multiple incisions and loss of Alston's eye." *Id.* Dr. Good also has emphasized in this case that it's likely that Dr. Llamas' negligence caused Daniella's harm.

2. <u>There is Science Supporting Dr. Good's Opinions, and Llamas' Own Expert Admits That Reasonable Experts Can Reach Different Opinions Regarding the Effectiveness of Treatment.</u>

The scientific evidence, including ETROP, proves that laser treatment for ROP provides a high degree of probability of improved outcome than non-treatment. However, to suggest that CRYO-ROP and ETROP are the beginning and the end of the ROP scientific analysis is wrong. A number of peer-reviewed articles have shown that properly performed laser treatment, even in Zone 1 eyes, resulted in a favorable structural outcome in 83.3% to 95.8% of the eyes treated.[4]

[4] Diode laser treatment of posterior retinopathy of prematurity by R. Axer-Siegel, et. al., <u>British Journal of Ophthalmology</u>, Dec. 2000, Vol. 84, No. 12, pp. 1383-6; Effectiveness of Diode Laser Photocoagulation for Zone I

As Dr. Good testified, typically successful visual outcome follows successful structural outcome. This position is supported by science as well as clinical experience.[5]

Defendant Llamas' own expert ophthalmologist (Dr. Quinn) acknowledge Dr. Good and Dr. Moshfeghi's testimony that earlier treatment of Daniella would have resulted in a better outcome for Daniella and said "they're experts in this and I agree and I'm also an expert in this and reasonable experts can disagree." Dr. Quinn went on to explain that reasonable experts could disagree on the issue:

> Q: And their testimony is based on statistics that earlier intervention more likely than not would have resulted in a better outcome for Daniella. You understand that don't you?
> A: I do understand their position on that.
> Q: Okay. And you're not saying that their position is wrong, are you?
> A: I'm saying that reasonable people can disagree on this issue.

(Quinn Deposition at 138.)

The science is clear that proper and timely laser treatment in a baby with ROP will prevent retinal detachment in over 80-90% of the cases. As Defendants' own expert acknowledges, ETROP showed that 91 percent of high risk prethreshold eyes did not develop an unfavorable structural outcome (including retinal detachment). (Quinn Deposition at 129.) To argue otherwise is junk science.

3. Defendants' Interpretations of CRYO-ROP and ETROP are Flawed and Constitute Junk Science.

Threshold Retinopathy of Prematurity by T.B. Redens, et.al., Investigative Ophthalmology & Visual Science, March 1995, Vol. 36, No. 4, abstract S69; and Diode-laser Photocoagulation for Zone I Threshold Retinopathy of Prematurity by Antonio Capone, Jr., et.al., American Journal of Ophthalmology, Oct 1993, Vol. 116, pp. 444-50; The Effectiveness of Diode Laser Treatment in Achieving a Favorable Anatomical Outcome in Eyes with Zone I Threshold Retinopathy of Prematurity by J.A. Schulman, et.al., Investigative Ophthalmology & Visual Science, Feb. 1996, Vol. 37, No. 3, abstract.

[5] Two-year results of laser treatment for retinopathy of prematurity at a single neonatal intensive care unit by Essex, R, et.al., Clinical and Experimental Ophthalmology 2005; 33: 390-394; Visual Acuity and Visual Field Development After Cryocoagulation in Infants With Retinopathy of Prematurity by Fetter WP, et al., Acta Paaediatr. 1992; 81(a):25-28; Long Term Functional and Structural Outcome of Laser Therapy for Retinopathy of Prematurity by McLoone, E, et al., , Br. J. Opthalmology June; 90(6):754-9.

Defendants attempt to use data from CRYO-ROP and ETROP regarding specific subgroups of patients to argue that the science does not support Plaintiff's arguments. First, CRYO-ROP dealt with a different type of treatment than provided to Daniella Bustamante. CRYO-ROP involved the use of cryo therapy to treat the ROP. Daniella was treated with laser. Further, CRYO-ROP was specifically designed to look at whether treatment with cryo-therapy was better than no treatment at all. The study was stopped before completion because the data showed a significant benefit of treatment.

ETROP involved the use of laser therapy for the treatment of ROP. The question was not whether laser therapy would more likely than not successfully treat the ROP as that was well established in practice and the literature. Rather, ETROP was designed to look at whether earlier treatment was superior to conventional treatment (threshold treatment). Again, the study was not powered to look at specific subgroups.

4. Dr. Good Can Rely on His Clinical Judgment in Rendering Opinions Regarding the Actual Treatment Performed by Dr. Llamas on Daniella.

As suggested above, loss of chance simply does not apply here, in particular, because there is actual evidence with respect to treatment and nontreatment here. Dr. Good has the clinical expertise and science to support his opinions that Daniella should have been treated at an earlier time and successful laser therapy would have not only prevented the retinal detachment in her right eye, but resulted in a more favorable visual outcome in her left eye. Beyond statistics, Dr. Good is saying, based on the evidence before him, that there is a very high degree of certainty in Daniella's case that proper treatment would have benefitted her. Dr. Good is very clear that the treatment administered by Dr. Llamas was inadequate. Beyond statistics, at trial we had actual photos in this case not done in the ETROP study or elsewhere that show areas of

non-treatment and Dr. Good is able to opine regarding how those areas of non-treatment impacted Daniella's vision.

Defendants also seem to suggest that Dr. Good cannot rely on extrapolations from experience together with interpretations of the literature. Defendants' argument suggests that experts are prohibited from making reasonable inferences from the evidence. Case law holds the exact opposite. Indeed, unlike juries, experts not only may, but often must stack inference. *See Welch v. McLean*, 191 S.W.3d 147, 160 n.7 (Tex. App. – Fort Worth 2005, no pet.); *S. Underwriters v. Hoopes*, 120 S.W.2d 924, 926 (Tex. App. – Galveston 1938, writ dismissed); *see also Insurance Co. of North America v. Myers*, 411 S.W.2d 710, 713 (Tex. 1966), and *Gideon v. Johns-Manville Sales Corp.*, 761 F.2d 1129, 1137 (5th Cir. 1985) (both cases hold that experts are permitted to make inferences from the evidence so long as the inference relies on "reasonable probabilities"). Good reaches a clinical judgment as he evaluates Daniella's complete medical record in context. Taken together, along with Good's nearly 20 years of experience in pediatric ophthalmology, Dr. Good's conclusions about reasonable medical certainty are permitted.

Statistical game playing in a case like this one misses the mark. Dr. Good's opinion is a clinical judgment and cannot be based on Dr. Good's study concerning visual outcomes for babies who undergo ablative therapy at threshold, as defense counsel attempted to argue during cross examination. Dr. Good and others have performed additional research on this issue and evaluated the impact of early ROP treatment based on subgroups.[6] These clinical researchers conclude that "[t]he study design did not specify any secondary hypotheses (such as prethreshold

[6] R.J. Hardy , W. V. Good, V. Dobson *et al*., *The Early Treatment for Retinopathy of Prematurity Clinical Trial: Presentations by Subgroups Versus Analysis Within Subgroups*, Br. J. Opthalmol 90:1341-1342, 2006, previously provided to the Court.

vs. threshold) with corresponding sample size requirements. Therefore, the power to separate out subgroups and produce valid findings is low."[7]

Obviously, there is no scientific evidence that exists, or would exist, evaluating the impact of withholding ROP treatment. Dr. Good has to extrapolate from experience to know that immediate treatment still mattered, because "No one would wait 72 hours to do treatment when it's needed. Such a study would not be ethical." And, "you have to use clinical judgment and not wait 72 hours where eyes show a need for treatment."

For these reasons it was beneath the standard of care to delay. But *in this case*, we have more than statistics and extrapolated experience for proximate cause. There are actual photos of Daniella's eyes that allow Dr. Good and Dr. Moshfeghi to opine regarding whether earlier treatment would have resulted in a more favorable structural and visual outcome for Daniella. Coupled with their experience in treating babies with ROP, this is more than sufficient evidence for them to base their opinions.

It has always been the rule that causation need not be supported by direct evidence because circumstantial evidence and inferences therefrom are sufficient bases for finding causation. *City of Gladwater v. Pike*, 727 S.W.2d 514, 518 (Tex. 1987); *Havner v. E-Z Mart Stores, Inc.*, 825 S.W.2d 456, 459 (Tex. 1992). "In a medical malpractice case, plaintiffs are required to show evidence of a 'reasonable medical probability' or 'reasonable probability' that their injuries were proximately caused by the negligence of one or more defendants." *Park Place Hosp. v. Estate of Milo*, 909 S.W.2d 508, 511 (Tex. 1995). Indeed, medical experts are permitted to stack inferences in order to get to the ultimate opinion on proximate cause. *See*

[7] *Id*. at 1341.

Welch v. McLean, 191 S.W.3d 147, 160 n.7 (Tex. App. – Fort Worth 2005, no pet.); *S. Underwriters v. Hoopes*, 120 S.W.2d 924, 926 (Tex. App. – Galveston 1938, writ dismissed).

The attached article, Multicenter Trial of Cryotherapy for Retinopathy of Prematurity, Ophthalmological Outcomes at 10 years, Arch. Ophthalmol. Vol. 119, Aug. 2001, which the defense failed to provide the Court as requested at the August 31, 2012 hearing, reveals the following:

1. "Previous reports from follow-up examinations of the patients in the Multicenter Trial of Cryotherapy for Retinopathy of Prematurity (Cryo-ROP)have demonstrated the beneficial effect of cryotherapy on eyes with threshold ROP"

2. "At 10 years, eyes that had received cryotherapy were much less likely than control eyes to be blind."

3. "The results show long-term value from cryotherapy in preserving visual acuity in eyes with threshold ROP."

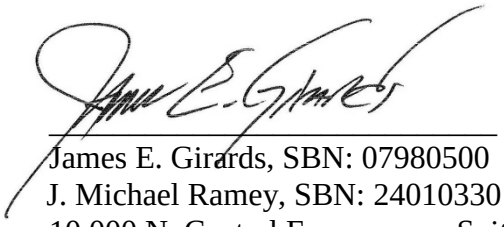
4. Table 4 shows that in patients with bilateral ROP like Daniella –

    a. Total retinal detachment was reduced from 23.8 to 11.6, a reduction of over 51%
    b. Glaucoma was reduced from 11 to 4.7, a reduction of over 57%
    c. Retinal fold in Zone 1 was reduced from 19.6 to 7, a reduction of over 64%
    d. Cataracts obscuring view of the fovea were reduced from 13.2 to 4.8, a reduction of over 63%
    e. Synechia (iris adhering to the cornea or lens) was reduced from 16.5 to 8, a reduction of over 51%
    f. Afferent defect in light reaction was reduced from 11.7 to 3.2, a reduction of over 72%
    g. Visual field reduction due to cryotherapy treatment was only 6 degrees

This study confirms that treating ROP correctly results in significant benefit to the patient, exceeding the 50% threshold, if that is even required in this context.

Respectfully Submitted,

THE GIRARDS LAW FIRM



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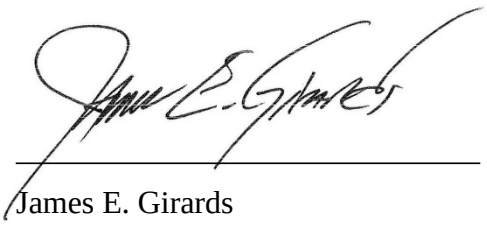
CERTIFICATE OF SERVICE

A true and complete copy of the foregoing document was provided to all counsel of record on September 1, 2012.



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