STATE OF MICHIGAN
IN THE CIRCUIT COURT FOR THE COUNTY OF LIVINGSTON

PEOPLE OF THE STATE OF MICHIGAN,

Plaintiff,

v.

JOSHUA QUINCY BURNS, 402

Defendant

_____/

No. 14-022070-FH
Hon. Miriam A. Cavanaugh

NOTICE OF HEARING

TO: Clerk of the Court
Livingston County Prosecutor

PLEASE TAKE NOTICE that on Thursday, October 8, 2015, at 1:30 p.m. or shortly thereafter, a preliminary scheduling hearing will be held before the Honorable Miriam A. Cavanaugh to determine when an evidentiary hearing will be heard on Defendant's Motion for New Trial. The Hearing on October 8 is *not* to determine whether Mr. Burns is entitled to a new trial, but to set a date when the Motion for New Trial will be heard.

Respectfully Submitted,

David A. Moran (P45353)
Attorney for Defendant

Dated: September 28, 2015

Caitlin Plummer (P78086)
Attorney for Defendant

STATE OF MICHIGAN
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Plaintiff,

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No. 14-022070-FH
Hon. Miriam A. Cavanaugh

JOSHUA QUINCY BURNS,

Defendant

_____/

Livingston County Prosecutor
210 S Highlander Way
Howell, MI 48843
(517) 546-1850

MICHIGAN INNOCENCE CLINIC
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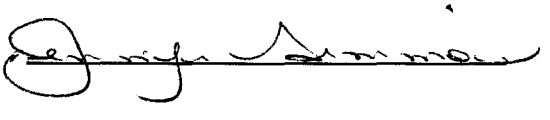
PROOF OF SERVICE

Jennifer Simmons states that on September 28, 2015, he/she served, by hand delivery, a copy of Defendant Joshua Burns' Motion for New Trial, Brief in Support of Motion for New Trial with Exhibits, Praecipe: Request for Service, Notice of Hearing on this Motion, and this Proof of Service on:

Livingston County Prosecutor
210 S. Highlander Way
Howell, MI 48843



STATE OF MICHIGAN 44TH JUDICIAL CIRCUIT LIVINGSTON COUNTY	**PRAECIPE** **REQUEST FOR HEARING** **CIRCUIT AND FAMILY JUDGE MOTION CALENDARS**	Case No. 14-022070-FH Receipt No.

Circuit Court Clerk: 204 S. Highlander Way, Ste. 4
Howell, MI 48843 (517) 546-9816

Judicial Center Howell: 204 S. Highlander Way
Brighton Court Location: 224 N. First Street

Plaintiff Name(s) People of the State of Michigan		Defendant Name(s) Joshua Quincy Burns
Address, and Telephone No. (Plaintiff or Attorney) Livingston County Prosecutor 210 S Highlander Way Howell, MI 48843	V	Address, and Telephone No. (Defendant or Attorney) Michigan Innocence Clinic ATTN: Ben St. Pierre 701 S. State St., Ann Arbor MI 48109

**** ALL PAPERWORK MUST BE FILED AT THE CIRCUIT COURT CLERK'S OFFICE****
A MINIMUM OF 7 DAYS BEFORE THE HEARING DATE. MOTION FILING FEE IS $20.00

1. Please place on the motion calendar for Judge Cavanaugh, Thursday October 8, 2015 - 1:30 pm
*Select Motion Date using Motion Calendars below

**** YOU MAY CONTACT THE CIRCUIT COURT CLERK'S OFFICE FOR DATE AVAILABILITY * (517) 546-9816***

☐ **JUDGE HATTY** P-30990 Court Room # 4 (517) 546-3060 Judicial Center Howell	**Thursdays...**	☐ 8:30 Criminal / License Restorations ☐ 1:30 Civil *Summary Disposition motions (limit of 4)
☐ **JUDGE GEDDIS P-35307** Court Room #2 (517) 540-7644 Judicial Center Howell	**Thursdays...**	☐ 1:30 Domestic Family Court ☐ 2:30 PPO's
☑ **JUDGE CAVANAUGH** P-61875 Court Room # 3 (517) 552-2515 Judicial Center Howell	**Thursdays...**	☑ 1:30 Criminal Docket
☐ **JUDGE DAVID J. READER P-27877** Court Room # 5 (517) 548-1120 Judicial Center Howell	**Wednesdays...** *** No motions on the 5th Wed. of a month**	☐ 8:30 Domestic/PPO's/Appeal Cases
☐ **JUDGE BRENNAN** P-34510 **BRIGHTON, MI** 224 N. First St. (810-540-8904)	**Mondays...** **Tuesdays...**	☐ 11:00 Divorce Docket / No Children ☐ 10:00 Civil Docket ☐ 11:00 Summary Dispositions

ADJOURNMENTS MUST BE REQUESTED THROUGH THE RESPECTIVE JUDGE'S OFFICE

2. Motion Title Defendant's Motion for New Trial

3. Motioning Party Joshua Burns, Defendant

Are there any unresolved motions pending in this case? ☐ yes ☑ no

Date 09/28/2015 Attorney / Motioning Party David A. Moran Bar No. P45353

ORDER/JUDGMENT

☐ IT IS HEREBY ORDERED that the aforesaid motion be and the same is hereby DENIED.

☐ IT IS HEREBY ORDERED that the aforesaid motion be and the same is hereby GRANTED.

☐ IT IS FURTHER ORDERED

Date _____ Judge _____

Revised & Effective October 3, 2014

Subscribed and sworn to before me this 27th day of September, 2015.

Alesha Quinton, Notary Public
My Commission Expires: January 16, 2018

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DEFENDANT'S MOTION FOR NEW TRIAL

Defendant Joshua Quincy Burns, through his attorneys, moves this Court, pursuant to MCR 7.208(B)(1), to grant a new trial after holding an evidentiary hearing on the claims presented in this motion.

1. On January 27, 2015, Mr. Burns was convicted of second-degree child abuse after a jury trial before this Court. On March 19, 2015, this Court sentenced Mr. Burns to three years' probation with the first year to be served in Livingston County Jail.

2. Mr. Burns filed a timely notice of appeal, and the final volumes of the transcripts were filed on August 3, 2015. Therefore, the 56-day period for him to file either a Brief on Appeal in the Court of Appeals or a Motion for New Trial in this Court expires on September 28, 2015. MCR 7.212(A)(1)(a)(iii), MCR 7.208(B)(1).
3. Mr. Burns now files this timely Motion for New Trial pursuant to MCR 7.208(B)(1). He requests that this Court hold an evidentiary hearing, pursuant to MCR 7.208(B)(3), and then order a new trial in this matter.
4. Mr. Burns is entitled to a new trial because he received ineffective assistance of counsel from his trial attorney, in violation of the Sixth Amendment to the United States Constitution and Article I, § 20 of the Michigan Constitution. *See Strickland v Washington,* 466 US 668; 104 S Ct 2052; 80 L Ed 2d 674 (1984).
5. Trial counsel committed several serious errors resulting in an unreliable verdict.
6. First, trial counsel failed to move to exclude portions of the testimony from the prosecution's primary expert, Dr. Bethany Mohr, even though those portions of Dr. Mohr's testimony were not "based on sufficient facts or data" and were not the "product of reliable principles and methods," nor had she reliably "applied the principles and methods [of the field] to the facts of the case." MRE 702.
7. During the prosecution's case-in-chief, Dr. Mohr, without an MRE 702 objection or a request for a *Daubert* hearing, the following unsupported claims about Naomi Burns' retinal hemorrhages: (1) they were "highly specific for physical abuse . . . specifically, repetitive acceleration deceleration" (TT2 54); (2) they were "very, very highly specific for repetitive acceleration deceleration" (TT2 85); (3) they could not have been caused by any mechanism other than shaking, with the possible exceptions of rollover car accidents and major crush

injuries (for which Dr. Mohr gave an example of a TV falling on Naomi) (TT2 85); (4) they could not have been explained by a short fall or any other event in her history (TT2 98-100); (5) standing alone, they would justify her diagnosis of abusive head trauma (TT2 137); and (6) they were sufficient, in themselves, for Dr. Mohr to "know" that Naomi "sustained repetitive acceleration deceleration" as "no other mechanism . . . would explain" them (TT2 171). Dr. Mohr also testified that: (7) retinal hemorrhages from abusive head trauma were "completely different" than retinal hemorrhages resulting from increased intracranial pressure (TT2 200); (8) Naomi Burns' retinal hemorrhages were distinguishable from retinal hemorrhages observed following a short fall by Dr. Piatt in his article (TT2 217-218); and (9) there were no "scientifically sound" reports about short falls causing multilayered, bilateral retinal hemorrhages (TT2 221).

8. Called as a rebuttal witness, Dr. Mohr went even further, again without an MRE 702 objection or a request for a *Daubert* hearing. Testifying in response to a question from the jury about the significance of the combination of subacute intracranial pressure, subdural hematoma and severe retinal hemorrhaging, Dr. Mohr responded that: (10) "in the absence of a motor vehicle collision or some type of severe crush injury, that would be highly, highly specific [for child abuse]. So probably close to 100% if you exclude those other causes." (TT10 152).

9. If challenged in a *Daubert* hearing, Dr. Mohr and the prosecution could not have supported these claims. Since the prosecution had no case against Mr. Burns without Dr. Mohr's conclusions that Naomi Burns' symptoms were diagnostic of child abuse, a different outcome would have been more than reasonably likely if trial counsel had made the appropriate challenges under MRE 702.

10. Second, trial counsel was ineffective in failing to provide this Court with the correct reason he should have been permitted to question Dr. Mohr about her exchange with Dr. Alexander Levin.

11. Trial counsel attempted to question Dr. Mohr about an exchange she had with Dr. Levin, a world-renowned ophthalmologist, in which Dr. Levin told Dr. Mohr that Naomi's thrombocytosis called into doubt Dr. Mohr's conclusion that the retinal hemorrhages were essentially diagnostic of child abuse (TT2 254-258). The prosecution, however, successfully objected on hearsay grounds to defense counsel's attempt to bring out the substance of Dr. Levin's communications (TT2 258-262).

12. In response to the prosecution's hearsay objection, trial counsel argued that Dr. Levin's statements were admissible as statements for medical diagnosis, MRE 803(4), a contention this Court correctly rejected because that hearsay exception assumes the declarant is a patient (or someone speaking on the patient's behalf), not a physician challenging another physician's diagnosis (TT2 258-262).

13. Trial counsel instead should have pointed out that Dr. Levin's communications were admissible not for the truth of the matter asserted but to impeach Dr. Mohr's conclusions. That Dr. Mohr would consult a leading ophthalmologist about her conclusion and then apparently ignore his response speaks volumes as to how unwilling Dr. Mohr was to reconsider her position. The evidence of Dr. Levin's communications was therefore directly relevant to establish that Dr. Mohr was biased. The exchange showed that she did not conduct a fair investigation and that she discarded opinions that did not match the conclusion she had formed immediately upon learning of the retinal hemorrhages.

14. Trial counsel's failure to state a legally valid basis to admit Dr. Levin's conclusions prejudiced Mr. Burns. The prosecutor's entire case depended on the jury accepting Dr. Mohr's conclusions. The trial would have reasonably likely had a different outcome if the jury had learned that Dr. Mohr had not changed her conclusions about the retinal hemorrhaging even after one of the world's leading experts on the retinal hemorrhaging told her she was likely wrong.
15. Trial counsel also erred by failing to make an offer of proof of the e-mail exchange to preserve the issue for appeal. Mr. Burns now attaches the exchange as an exhibit to the accompanying brief to preserve the issue of trial counsel's ineffectiveness for appeal.
16. Third, trial counsel may have been ineffective in failing to renew his objection to this Court's refusal to instruct the jury on the meaning of the term "reckless" in the second-degree child abuse statute.
17. Trial counsel filed a written motion *in limine* on November 14, 2014, requesting that this Court instruct the jury that "reckless" means a "deliberate disregard" of the risk of harm described in the statute. At a motion hearing on December 11, 2014, defense counsel renewed his argument and explained that the jury should be told that it must find that Mr. Burns acted with the "deliberate disregard of the likelihood" that his conduct would result in harm to Naomi (MH 12/11/14 17-19).
18. On January 9, 2015, this Court, relying on the unpublished *People v Copeland* case, concluded that it would read only the standard instructions for a second-degree child abuse case and would not give the requested instruction on recklessness (MH 1/9/15 10-11). Accordingly, when this Court read the instructions to the jury at the conclusion of the trial, this Court did not define "recklessness" beyond the standard instructions. (TT10 283-284).

19. Trial counsel did not renew his objection to the lack of definition of "recklessness" at the time the Court read those instructions (TT10 293).

20. Mr. Burns believes the "recklessness" instructional issue is fully preserved by trial counsel's motion *in limine* on November 14, 2014, by the argument on that motion on December 11, 2014, and by this Court's ruling of January 9, 2015. If this Court believes, however, that trial counsel was required to object again when the instructions were given to preserve the issue for appeal, then trial counsel plainly engaged in deficient performance in failing to object again.

21. In addition to ineffective assistance of counsel, Mr. Burns is entitled to a new trial because the verdict was against the great weight of the evidence.

CONCLUSION

For these reasons and the reasons set forth more fully in the accompanying Brief in Support of Motion for New Trial, Defendant Joshua Burns respectfully requests that this Court order a new trial after holding an evidentiary hearing in this matter.

Respectfully submitted,

Dated: September 28, 2015

David A. Moran (P45353)
Attorney for Defendant

Caitlin Plummer (P78086)
Attorney for Defendant

Ben St. Pierre
Student Attorney for Defendant

Alex M. Johnson
Student Attorney for Defendant

Osahon Okundaye
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DEFENDANT'S BRIEF IN SUPPORT OF MOTION FOR NEW TRIAL

STATEMENT OF FACTS

Defendant Joshua Burns was convicted of second-degree child abuse after an 11-day trial before this Court. On March 19, 2015, this Court sentenced Mr. Burns to three years of probation, with the first year to be served in the Livingston County Jail.

Mr. Burns filed a timely claim of appeal, and the last of the transcripts were filed on August 3, 2015. Mr. Burns now files this Motion for New Trial, pursuant to MCR 7.208(B)(1).

Additional facts relating to the specific issues raised in this motion will be discussed below in the Argument section.

ARGUMENT

I. Mr. Burns Is Entitled To A New Trial Because He Received Ineffective Assistance Of Counsel.

The United States and Michigan Constitutions guarantee a criminal defendant the effective assistance of counsel at trial. US Const Amends VI, XIV; Const 1963, art 1, § 20; *Strickland v Washington*, 466 US 668; 104 S Ct 2052; 80 L Ed 2d 674 (1984). To establish ineffective assistance of counsel, the defendant must demonstrate that counsel's performance fell below an objective standard of reasonableness and that the representation prejudiced the defendant so as to deprive him of a fair trial. *See Strickland, supra* at 669; *see also People v Pickens*, 446 Mich 298; 521 NW2d 797 (1994) (adopting the *Strickland* test for ineffective assistance under the Michigan Constitution).

Prejudice means a "reasonable probability" that the result of the proceeding would have been different absent counsel's errors. *Strickland, supra* at 694. An apparently minor error may still be sufficient to warrant reversal in a close case. *See, e.g.*, *People v Dixon*, 263 Mich App 393, 397-98; 688 NW2d 308 (2004). The cumulative effect of several errors by counsel may warrant reversal even if individual errors in the case would not constitute sufficient prejudice. *People v Knapp*, 244 Mich App 361, 388; 624 NW2d 227 (2001).

Mr. Burns' trial attorney was constitutionally ineffective because he failed to: (1) raise a *Daubert* challenge to Dr. Mohr's insupportable medical testimony regarding the very high degree of confidence she had as to the cause of Naomi Burns' symptoms; and (2) adequately rebut the prosecution's objections to impeachment evidence that would have undermined Dr.

Mohr's opinions.[1]

Because this case depended entirely on the reliability of Dr. Mohr's diagnosis, each of trial counsel's errors prejudiced Mr. Burns as there is a reasonable probability that the result of the proceeding would have been different absent these errors. Each of these errors independently satisfies the *Strickland* prejudice prong, but when considered cumulatively, they undoubtedly establish prejudice.

A. Trial Counsel Was Ineffective For Failing To Raise A *Daubert* Challenge To Unsupported Medical Testimony By Dr. Mohr.

Under MRE 702, expert witnesses can only testify if the court determines, "(1) the testimony is based on sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case." MRE 702 incorporates the federal reliability standard of *Daubert v Merrell Dow Pharmaceuticals, Inc*, 509 US 579; 113 S Ct 2786; 125 L Ed 2d 469 (1993). *Gilbert v Daimler Chrysler Corp*, 470 Mich 749, 781; 685 NW2d 391 (2004). To fulfill this role, the court must conduct a searching inquiry into the expert's methods and analyses to ensure that their conclusions are based on "reliable principles and methodologies." *Gilbert* at 782 (internal quotations omitted). "Careful vetting of all aspects of expert testimony is especially important when an expert provides testimony about causation." *Id.* at 782. The proponent of expert testimony bears the burden of establishing its reliability. *Id.* at 781.

MRE 702 does not merely deal with the qualification of witnesses, but also requires that any testimony an expert gives is reliable. *Id.* at 780-781; *see also Daubert*, 509 US at 589.

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[1] In addition, as discussed below, if there is any question as to whether trial counsel adequately preserved his request for a definition of the term "reckless" in the jury instructions, counsel would be ineffective in failing to do so.

Accordingly, even if an expert is generally qualified in her field, "any and all" testimony must be evaluated to determine whether each assertion is reliable.

To determine whether proffered medical causation testimony is reliable, courts look to the following non-exclusive factors: (1) whether the method or technique has been tested; (2) whether the method or technique has been subjected to peer review and publication; (3) the potential or known rate of error; and (4) whether the method or technique is generally accepted within the relevant scientific community. *Daubert,* 509 US at 593-94.[2] Specific parts of Dr. Mohr's testimony fail under this analysis as they were unsupported by medical science.

1. **Portions of Dr. Mohr's Testimony Should Have Been Subjected to a *Daubert* Challenge**

Many courts have recognized that abusive head trauma and shaken baby syndrome diagnoses are highly controversial and scientifically questionable, including the Michigan Supreme Court this year. *People v Ackley*, 497 Mich 381; ___ NW2d ___ (2015) (recognizing the "prominent controversy within the medical community regarding the reliability of SBS/AHT diagnoses"); *Del Prete v Thompson*, 10 F Supp 3d 907, 957 n.10 (ND Ill 2014) (describing claims of Shaken Baby Syndrome/Abusive Head Trauma as arguably "more an article of faith than a proposition of science"); *Cavazos v Smith*, ___ US ___; 132 S Ct 1, 10; 181 L Ed 2d 311 (2011) (Ginsburg, J, dissenting) (quoting Donohoe, Evidence–Based Medicine and Shaken Baby Syndrome, Part I: Literature Review, 1966–1998, 24 Am. J. Forensic Med. & Pathology 239, 241 (2003) for the proposition that by 1998 "the commonly held opinion that the finding of

[2] It is important to note that "it is insufficient for the proponent of expert opinion merely to show that the opinion rests on data viewed as legitimate in the context of a particular area of expertise (such as medicine). The proponent must also show that any opinion based on those data expresses conclusions reached through reliable principles and methodology." *Gilbert, supra* at 782.

[subdural hemorrhage] and [retinal hemorrhage] in an infant was strong evidence of SBS was unsustainable."); *see also State v Edmunds,* 746 NW2d 590, 596 (Wis App 2008) (recognizing growing controversy as to reliability of SBS/AHT diagnoses).

This Court, however, need not examine the underlying reliability of SBS/AHT as a whole. Even if one accepts AHT as a supportable diagnosis, its application in this case is still devoid of scientific support. Specifically, trial counsel should have requested a *Daubert*/702 hearing on two of Dr. Mohr's claims, which formed the core of her testimony.

Mohr Claim 1: Naomi's retinal hemorrhages were "very very highly specific" to abuse.

Dr. Mohr repeatedly asserted that "multilayered retinal hemorrhages that are 360 that are just not confined to one small portion of the eye or the back of the eye" are "very very highly specific for repetitive acceleration deceleration." TT2 85; *see also id.* at 137.[3] The only non-abusive mechanism Dr. Mohr acknowledged could cause similar hemorrhages are "roll over vehicle collisions" and crush injuries, like a "huge heavy TV falling on a baby or child." TT2 85-86, 165-67, 196-98; TT9 152. Dr. Mohr repeatedly denied that a short fall or increased intracranial pressure could cause these retinal hemorrhages, TT2 217, 222, and she dismissed the possibility Naomi's thrombocytosis could have caused the retinal hemorrhages, *id.* at 118, 253-54. Naomi's retinal hemorrhages were the only symptoms on which Dr. Mohr directly and exclusively relied to conclude that she had suffered a "repetitive acceleration deceleration" injury. TT2 137-38.

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[3] Dr. Mohr was undoubtedly aware that the shaken baby syndrome hypothesis, namely that one can reliably "diagnose" abuse from retinal hemorrhages and/or subdural hematomas, has come under intense scrutiny in recent years. Dr. Mohr carefully avoided using the terms "shaken baby syndrome," "shaken baby," or even "shaking" and instead repeatedly used the phrase "repetitive acceleration deceleration" to describe her conclusion that Naomi had, in fact, been either shaken or shaken and then slammed into a soft surface.

If counsel had moved for a *Daubert* hearing, Dr. Mohr would not have been able to defend this testimony. There is no scientific basis for contending that retinal hemorrhages (or a particular type or pattern of retinal hemorrhages) are reliably diagnostic of abuse, much less "very very highly specific" to abuse. Very little is even known about the mechanism of retinal hemorrhage in infants. *See, e.g.,* Emerson et al., Ocular Autopsy and Histopathologic Features of Child Abuse, 114 Am. Acad. Ophthalmology 1384, 1394 (2007) (given the current lack of knowledge, "much of what we think we know about the systemic and ocular findings of child abuse will continue to be the result of speculation rather than based on sound evidence."). Moreover, the claim that only abuse (or, as Dr. Mohr allowed, a rollover accident or severe crush injury) can cause severe retinal hemorrhage is outdated and false. Minor accidents have resulted in retinal hemorrhages and retinal changes — the very sort of retinal findings previously only attributed to abuse or severe accidents. *See, e.g.,* Watts, P. & Obi, E. *Retinal folds and retinoschisis in accidental and non-accidental head injury*, EYE ADVANCE [online publication] 18 July 2008, doi:10.1038/eye.2008.224. (comparing two case studies, one accidental and one non-accidental, with very similar ophthalmic findings) ; Leuder, G.T. et al., *Perimacular Retinal Folds Simulating Nonaccidental Injury in an Infant*, 124 ARCH. OPHTHALMOL. 1782 (2006); Lantz, P.E. et al., *Fatal acute intracranial injury, subdural hematoma, and retinal hemorrhages caused by stairway fall*, 56 J. FORENS. SCI. 1648 (2011); J. H. Piatt, *A Pitfall in the Diagnosis of Child Abuse: External Hydrocephalus, Subdural Hematoma, and Retinal Hemorrhages*, 7 Neurosurg. Focus e4 (1999).

In 2010, Dr. Evan Matshes reported that retinal hemorrhages are commonly found in natural and accidental deaths, as well as in homicides. He identified a statistically significant relationship between retinal and optic nerve sheath hemorrhage and the restoring of cardiac

rhythm following advanced life support and cerebral edema, regardless of etiology. Matshes, E. *Retinal and Optic Nerve Sheath Hemorrhages Are Not Pathognomonic of Abusive Head Injury,* 16 PROC. AM. ACAD. FORENSIC SCI. 272 (2010). The study concluded that eye evaluations are of "limited value" in child death investigations. A 2001 study on short-distance falls examining 18 fatal falls from low heights found that out of the six children who had an eye examination post-mortem, four — a full 66% —had bilateral retinal hemorrhage. Plunkett, J. *Fatal Pediatric Head Injuries Caused by Short-Distance Falls*, 22 AM. J. FORENS. MED. & PATH. 1 (2001). In a study by Nobuhiko Aoki and Hideaki Masuzawa, short-distance falls from sitting or standing positions were described to be the cause of acute subdural hemorrhage and retinal hemorrhage in 26 infants. Aoki, N. & Masuzawa, H., *Infantile acute subdural hematoma: Clinical analysis of 26 cases*, 61 J. NEUROSURG. 273 (1984).

Retinal hemorrhages have additionally been found in an ever-expanding collection of disorders, many of which have nothing to do with any trauma. Retinal hemorrhages, including severe ones like the ones seen in this case, have been seen in a wide variety of diseases and medical conditions. Patrick E. Lantz & Constance A. Stanton, *Postmortem Detection & Evaluation of Retinal Hemorrhages,* 12 PROC. AM. ACAD. SCI. 271, 271 (2006) (retinal hemorrhages present at autopsy in infants who died from meningitis, asphyxia/suffocation, prematurity/congenital conditions, heart disease, in utero hemorrhage, sudden infant death syndrome/resuscitation, apnea/gastroesophageal reflux, and birth-related causes); Henry E. Aryan et al., *Retinal Hemorrhage & Pediatric Brain Injury: Etiology & Review of the Literature*, 12 J. CLIN. NEUROSCI. 624 (2005) (retinal hemorrhages associated with an ever-expanding list of conditions); Sankaranarayana P. Mahesh & Jeevan R. Mathura, Jr., *Retinal Hemorrhages Associated with High Altitude*, 362 N. ENGLAND J. MED. 1521, 1521 (2010); Juan Pablo Lopez et

al., *Severe Retinal Hemorrhages in Infants with Aggressive Fatal Streptococcus Pneumonia Meningitis,* 14 J. AM. ASS'N. PEDIATRIC OPHTHALMOL. STRABISMUS 97 (2010) (Dr. Alexander Levin, the well-known ophthalmologist Dr. Mohr contacted regarding Naomi Burns's retinal findings, is a co-author on this publication).

Dr. Mohr's particular claim that retinal hemorrhages that are severe, multi-layered or extend to the ora serrata are diagnostic of abuse is also unsupported by adequate literature. Severe retinal hemorrhages that extended the to the ora serrata have been observed following infection. Lopez et al, *supra* 97-98. Another study describes multilayered hemorrhages extended to the ora serrata in a short fall. P. E. Lantz and D. Couture, *Fatal Acute Intracranial Injury, Subdural Hematoma, and Retinal Hemorrhages Caused by a Stairway Fall,* 56 J. Forensic Sci. 1648 (2011).

Accordingly, the underlying premise of Dr. Mohr's statements (that Naomi's RH were "very very" specific for abuse) is contradicted by the relevant literature. Moreover, her opinion has been contradicted by every other expert who examined this case. Dr. Alexander Levin, a well-known ophthalmologist who Dr. Mohr herself reached out to specifically told her that the retinal findings were essentially meaningless in the context of Naomi's elevated platelet count. Levin Email (Exhibit A to this Brief). He told her "we have no idea" what effect thrombocytosis has on retinal hemorrhage.

Moreover, two additional pediatricians with expertise in child abuse, Dr. Marcus DeGraw and Dr. Stephen Guertin, both testified at the trial that Naomi's retinal hemorrhages were not diagnostic of child abuse despite the fact that they were multilayered, existed in all four quadrants, and extended to the ora serrata. They could easily have been explained by the short fall Mr. Burns described, especially given her history of birth trauma, thrombocytosis, chronic

subdural hematomas, and excess space created by the subdurals. TT6 209, TT7 65. Dr. DeGraw explained further:

> [N]obody can sit up here on the stand and say the only thing that causes [retinal hemorrhages] is abusive head trauma. And clearly some of the other things we've talked about contribute to that. And I've had cases of other findings where we have significant retinal hemorrhages that can be attributed to other things. **So using that as a definite marker for abusive head trauma is not good science. It's not good medicine**. TT7 65 (emphasis added; non-verbal fillers deleted).

In addition to the experts he presented at the criminal trial who contradicted Dr. Mohr's claim that the retinal hemorrhages were highly specific to "repetitive acceleration deceleration," defense counsel also had a report by Dr. Khaled Tawansy. He is another expert who reviewed this case and found "nothing specific about the retinal findings to suggest the angular acceleration-deceleration injury of shaking." Tawansy Report (Exhibit B to this Brief).

Finally, Mr. Burns is not aware of any study that establishes what the error rate is in diagnosing AHT based on retinal hemorrhages or on any other symptom. There is little doubt, however, that errors have been made in the diagnosis of AHT generally. *See* Debbie Cenziper, *Shaken Science: A Disputed Diagnosis Imprisons Parents*, Washington Post, March 20, 2015 (identifying 16 convictions in SBS/AHT cases that have been overturned, and 200 in which charges were dropped or defendants were acquitted at trial).

Mohr Claim 2: Naomi's symptoms together are "close to 100%" diagnostic of abuse.

When prosecution called Dr. Mohr as a rebuttal witness, a member of the jury asked her, "In your experience, what percentage of cases are diagnosed as child abuse . . . when there is the presence of a subdural hematoma, subacute intracranial bleeding, and severe retinal hemorrhage all in combination?" TT9 152. Dr. Mohr answered "[s]o in the absence of a motor vehicle collision or some type of severe crush injury, that would be highly, highly specific . . . [s]o probably close to 100% if you exclude those other causes." *Id.* While the question included

subdural hematoma, Dr. Mohr explicitly stated earlier in her testimony that her diagnosis would have been the same absent that finding. TT2 135.

Dr. Mohr's assertion had absolutely no basis in science. No scientific research or study backs Dr. Mohr's assertion of the near "100 percent" accuracy of her diagnosis; she merely pulled this number from thin air. *See Daubert* at 590 ("arguably, there are no certainties in science"). While no definitive research exists on the accuracy of SBS/AHT diagnoses, research on misdiagnosis in other contexts shows that errors are common in all areas of medicine, perhaps comprising up to 20% of all diagnoses. A 2012 study published in the Journal of the American Medical Association stated "cases of delayed, missed or incorrect diagnoses are common, with an incidence in the range of 10-20%." Mark L. Graber et al., *Bringing Diagnosis into the Quality and Safety Equations*, 308 JAMA 1211 (2012). But AHT diagnoses are far more difficult than many other medical diagnoses because, as even the strongest proponents of SBS/AHT admit, there are no standardized diagnostic criteria and there are no objective medical tests that can determine abusive causation. *See, e.g.* Piteau et al, *Clinical and Radiographic Characteristics Associated with Abusive and Nonabusive Head Trauma: A Review* 130 Pediatrics 315 (2012) ("As there are no standardized criteria for the definition of abuse..."), Kent P. Hymel et al., Derivation of a clinical prediction rule for pediatric abusive head trauma, 14 PEDIATRIC CRITICAL CARE MEDICINE 210, (2013) ("Evidence-based screening tools for abusive head trauma do not exist...[T]here is no gold standard for AHT diagnosis.").

As a result, diagnoses are based on a combination of medical findings (which themselves can be misidentified) and patient history, which can be elusive and is often subject to opinions about whether the interviewee is being truthful, rather than objective fact. Physicians did once believe they could reliably diagnose SBS/AHT based on the presence of the so-called triad of

subdural hematoma, retinal hemorrhage, and cerebral edema (or encephalopathy).[4] Until fairly recently, the leading physicians in the child abuse protection community argued strongly that shaking or other abuse could be reliably and confidently diagnosed by finding the triad. *See, e.g.,* Chadwick et. al., *supra,* Peter G. Richards et. al., *Shaken Baby Syndrome,* 91 Arch. Dis. Child 205 (2005) ("The triad of encephalopathy, subdural haemorrhages, and retinal haemorrhages as an indicator of head injury has stood the test of time.").

Now leaders in pediatrics confirm that no responsible physician would diagnose abuse based on this "triad." The new AAP position paper, revised in 2009, backs off the certainty of the diagnosis, now asserting instead that "the mechanisms and resultant injuries of accidental and abusive head injury overlap." Christian et. al., *supra* at 1410. As Dr. Bob Sege, director of Family and Child Advocacy at Boston Medical Center and a member of the AAP Committee on Child Abuse and Neglect, recently told NPR, "[t]he real straw man argument is the idea that diagnosing abusive head trauma relies solely on those three injuries...." http://www.npr.org/sections/health-shots/2015/07/29/427449852/doctors-devise-a-better-way-to-diagnose-shaken-baby-syndrome. Dr. Carole Jenny is a former Brown University Pediatrics professor and longtime child abuse pediatrician and SBS-hypothesis advocate. She now teaches that "[n]o trained pediatrician thinks that subdural hemorrhage, retinal hemorrhage and encephalopathy equals abuse." Carole Jenny, *Presentation on The Mechanics: Distinguishing AHT/SBS from Accidents and Other Medical Conditions*, slide 33, 2011 New York City Abusive Head Trauma/Shaken Baby Syndrome Training Conference (Sept. 23, 2011), (PowerPoint available at http://www.queensda.org/SBS_Conference/SBC2011.html).

[4] This third piece of the triad was not present in Naomi's case, but that did not stop Dr. Mohr from diagnosing AHT (with shaking as the mechanism) nonetheless.

There is now near-universal agreement, even among the strongest proponents of the SBS/AHT diagnosis, that the presence of the triad alone is not enough to diagnose abuse with a high degree of confidence. Moreover, all medical diagnoses are subject to some degree of error. But Dr. Mohr made a virtually "100 percent" certain diagnosis anyway, with only two of the three individual components of the triad and in reality relying entirely on one component (the retinal hemorrhages), all without objection from the defense.

In short, there is nothing in the record that establishes the scientific basis for Dr. Mohr's claims regarding the diagnostic specificity of the retinal hemorrhages or subacute bleeding other than her *ipse dixit* testimony. An evidentiary hearing is required to establish whether the state could have met its burden under MRE 702. Mr. Burns maintains that it could not.

2. Counsel Was Objectively Unreasonable in Not Raising a *Daubert* Challenge to These Portions of Dr. Mohr's Testimony.

Defense counsel was ineffective for failing to move for a hearing pursuant to *Daubert* and *Gilbert* to exclude Dr. Mohr's claims. Such claims are exactly the kind of statements MRE 702 is designed to exclude. Whether an attorney's actions were reasonable depends on the facts of the particular case. *See Strickland* at 690.

Defense counsel knew this case would be a "battle of experts," ultimately coming down to which experts the jury would find more convincing. Defense counsel also knew the substance of Dr. Mohr's testimony and the level of certainty with which she would testify. At the preliminary examination, she testified to the same level of certainty.

> Q: I'm asking whether these retinal hemorrhages have only one explanation possible that's a significant traumatic event.
>
> A: Correct. Anything that would involve significant acceleration and deceleration.
>
> Q: Okay. So maybe there was absolutely not another possible explanation in Naomi's case.

A: Not for the type of retinal hemorrhages she has.

* * * *

A: Her retinal hemorrhages are diagnostic of abuse in the context also of her head bleeds and her clinical presentation.

* * * *

A: [T]hese hemorrhages are diagnostic of abusive head trauma.

PE1 137; PE2 25, 29. Because defense counsel knew that she would give such testimony at trial, he should have moved before trial or even during her testimony to exclude such statements under MRE 702.

Indeed, defense counsel himself now admits that he should have moved to exclude these specific aspects of Dr. Mohr's testimony. See Affidavit of Michael J. Cronkright at 2 (attached as Exhibit C to this Brief).

Had defense counsel moved for a *Daubert* hearing on Dr. Mohr's specific claims discussed above, the burden would have been on the prosecution to establish the medical reliability of these claims. Mr. Burns maintains the prosecution would not have been able to do so, as this Court will see for itself when it holds an evidentiary hearing on this motion.

3. Dr. Mohr's Unfounded Assertions Prejudiced Mr. Burns.

Dr. Mohr's extremely confident diagnosis of abuse, raised to a level of "close to 100%," in her rebuttal testimony, was essentially the entire case against Mr. Burns. The jury repeatedly heard how Naomi's retinal hemorrhages and subdural bleeding foreclosed all conclusions but abuse. At the end of her rebuttal testimony, when the jury asked her to clarify, she gave them a nearly 100% guarantee of her diagnosis.

In her closing argument the prosecutor echoed Dr. Mohr's unsubstantiated claims, arguing the "subacute" cerebellar bleeding and retinal hemorrhages were "highly, highly diagnostic of child abuse." TT9 230; *see also id.* at 222, 223, 264, 267, 268, 272, 273.

As the prosecutor pointed out to the jury, Dr. Guertin and Dr. DeGraw, who very commonly testify for the prosecution in child abuse cases, could not conclusively rule out abuse in this case even though both of them thought it was unlikely. TT9 267. That hesitation is prudent. Their testimony more responsibly reflected what could and could not be said about Naomi's symptoms based on the current state of medical science. The prosecutor compared the responsibly measured medical testimony given by Dr. Guertin and Dr. DeGraw, which allowed for uncertainty, with the virtually certain, and therefore unscientific, testimony of Dr. Mohr.

Of course, as the prosecutor knew, a lay jury is likely to find a "close to 100%" diagnosis to be more persuasive than the more uncertain differential diagnoses given by Drs. Guertin and DeGraw. This controversy is precisely why the *Daubert* standard exists: the expert who confidently but falsely claims certainty or near certainty is dangerous precisely because she is likely to be believed over the more responsible expert who admits doubt.

Even so, this case was close and the jury deliberated for several days before returning a verdict. If Dr. Mohr had been precluded from claiming a high degree of certainty that Naomi's symptoms proved abuse, a different outcome would have been reasonably likely. Therefore, Mr. Burns was prejudiced by trial counsel's failure to object on *Daubert*/MRE 702 grounds to Dr. Mohr's claims discussed above.

B. Trial Counsel Was Ineffective For Failing To Answer The Prosecution's Hearsay Objection To The Levin Email Exchange By Offering The Evidence Not Offered For The Truth Of The Matter Asserted And For Failing To Make An Offer Of Proof.

During the cross-examination of Dr. Mohr, the prosecution objected on hearsay grounds to the defense counsel's attempt to question her about the email exchange she had with Dr. Alexander Levin about the significance of Naomi Burns' retinal hemorrhages. Trial counsel's response to these objections amounted to ineffective assistance of counsel in two respects: (1) he failed to explain to the Court that the challenged emails were not hearsay because they were not being offered for the truth of the matters asserted; and (2) he failed to preserve the issues for appeal by making an offer of proof, as required by MRE 103.

Evidence that is not admissible for one purpose according to the rules may be admissible for another. *See* MRE 105. Thus, in *Stachowiak v Subczynski*, 411 Mich 459, 464; 307 NW2d 677 (1981), the Supreme Court held that a trial judge in a medical malpractice case correctly admitted charts from medical textbooks over a hearsay objection where they were used not for the truth of the matters asserted but "to explain why the doctor proceeded as he did." The trial judge therefore instructed the jury not to consider the charts for the truth of the matters asserted in those charts. *Id.* at 464-65.

During his cross-examination of Dr. Mohr, defense counsel attempted to admit email correspondence between her and Dr. Alexander Levin, a very highly-regarded ophthalmologist, about Naomi's retinal hemorrhages. TT2 257. Dr. Mohr had sent Dr. Levin emails detailing Naomi's findings, including Naomi's retcam images. She specifically asked what effect an increased platelet count might have on the diagnosis. Mohr Email 4/2/14, 4/3/14. Dr. Levin replied, "we have no idea what this might do re retinal bleeding and could be considered to throw the retinal findings into question. We just don't know." Levin Email, 4/5/14 (Exhibit A).

The prosecution objected to the use of the emails as hearsay. TT2 258. Defense counsel responded by arguing that the emails were admissible as statements for medical diagnosis, MRE 803(4), TT2 260, but this Court correctly sustained the objection because that hearsay exception is applicable to a patient making statements to a health professional for purposes of diagnosis, not to statements between doctors. *Id.* at 261. Defense counsel then attempted to navigate his questions around the exclusion but was met by the prosecutor's repeated objections. TT2 263-64. Because defense counsel was unable to introduce the emails, Dr. Mohr was able to state "what [Dr. Levin] said wasn't different in my opinion to my diagnosis," without being expressly contradicted by Dr. Levin's final reply. TT2 266.

Defense counsel failed to articulate the non-hearsay purposes for which the email exchange was admissible. Specifically, the emails were admissible not for the truth of the matter asserted but for the express purpose of exposing Dr. Mohr's bias, including her tendency to dismiss information that contradicts her diagnosis. That is, the email was admissible and valuable to show that Dr. Mohr sought an opinion from a leading ophthalmologist and, when that opinion did not match her pre-existing conclusion, she simply ended the exchange and ignored it. In short, <u>the email exchange was admissible and probative because it proved that Dr. Mohr had already made up her mind and was not open to reconsidering her diagnosis, a showing that goes directly to the credibility of her diagnosis</u>.

A limiting instruction would have ensured that the jury did not consider Dr. Levin's statements for the truth of the matter asserted. Defense counsel was ineffective in failing to respond correctly to the prosecutor's hearsay objection, thus losing valuable impeachment evidence for his client. He was again ineffective in failing to make an offer of proof, as required

by MRE 103, to preserve the issue for appeal. Mr. Burns now makes that offer of proof by attaching the emails as Exhibit A to this brief.

Trial counsel's failures prejudiced Mr. Burns because, as discussed above in Part A, this trial was obviously very close and the prosecution's entire case hinged on the jury accepting Dr. Mohr's highly confident diagnosis of abuse over Dr. Guertin's and Dr. DeGraw's conclusions that abuse was not the most likely cause of Naomi's symptoms. If the jury had heard that Dr. Mohr consulted one of the world's leading ophthalmologists to confirm her conclusions and then ended the exchange when that confirmation did not come, it would have cast grave doubt on her diagnostic process and the extreme confidence with which she held that diagnosis.

In short, if counsel had properly responded to the prosecution's objection, there is a reasonable probability that the jury, which struggled with the case as it stood, would have reached a different result.

C. Trial Counsel Was Ineffective To The Extent That His Failure To Object To The Jury Instructions As Given, Which Did Not Define "Reckless," Constitutes A Failure To Preserve Or Waiver Of The Claim For Appeal.

A court's failure to "instruct on any point of law shall not be ground for setting aside the verdict of the jury unless such instruction is requested by the accused." MCL 678.29. Before trial, defense counsel filed a written motion requesting a jury instruction to define the statutory term, "reckless" and that motion was argued at hearing on December 11, 2014. The Court denied the motion orally at the final conference on January 9, 2015. FSC 1/9/15 10-11.

The actual jury instruction given to the jury at the end of the trial did not define "reckless." TT9 283. The Court twice asked defense counsel if he had any objections to instructions as read, and twice counsel answered in the negative. TT9 293-94.

Mr. Burns believes that the issue as to the failure to define "reckless" is fully preserved for appeal by defense counsel's pretrial motion. If this Court concludes, however, that the issue is not fully preserved because trial counsel did not object again when the instructions were delivered to the jury,[5] then it follows that trial counsel would have been ineffective in failing to take the minor step needed to preserve the issue for his client's appeal. Mr. Burns would also be prejudiced because that failure would prevent him from obtaining appellate review on an important issue of law.

II. Mr. Burns Is Entitled To A New Trial Because The Jury Verdict Was Against The Great Weight Of Evidence

A claim that addresses the weight of the evidence "can be raised only by motion for a new trial." *People v Strong*, 143 Mich App 442, 450; 372 NW2d 335, 338 (1985). Mr. Burns makes this motion pursuant to MCR 7.208(B)(1), which specifically allows a defendant-appellant to file a motion for a new trial or judgment of acquittal in the trial court. Defense counsel moved for a directed verdict at the close of the prosecution's case-in-chief, which the court denied, TT6 126, 135-37, Counsel did not move the Court for a new trial on great weight grounds after the verdict.

The jury's verdict in this case was against the great weight of the evidence. The jury heard from three pediatricians who specialize or have specialized in child abuse cases, all three

[5] In *People v Carter*, 426 Mich 206, 216; 612 NW2d 144 (2000), the Supreme Court concluded that an instructional issue was waived when defense counsel expressed satisfaction with the instructions as delivered. Mr. Burns believes *Carter* is distinguishable from this case as there was apparently neither an objection to the instruction at issue nor a request for a different instruction earlier in the proceedings, as there was in this case. But if *Carter* is extended to the facts of this case, it follows that trial counsel, who had filed a pretrial motion because of dissatisfaction with the standard instructions, was ineffective in not objecting at the time the instructions were given.

of whom testify for the prosecution in child abuse cases almost 100% of the time. Two of those three pediatricians testified that Naomi Burns' symptoms were more consistent with natural processes or accidental trauma than inflicted abuse. As discussed above, those two pediatricians gave responsible testimony, admitting that there was uncertainty. But against the great weight of that responsible and sober evidence, the jury accepted the testimony of a single witness who was willing to state with virtual certainty that she could "know" that Naomi was abused just from two of the three symptoms of the triad, even though, as discussed above in Part I(A), no responsible child abuse pediatrician gives such testimony anymore even when all three parts of the triad are present.

There was no other evidence of abuse. This is not a case where there were external signs of abuse or other troubling episodes to support an abuse diagnosis. There was no confession here. On the contrary Mr. Burns told everyone, without prompting, the same account of Naomi falling from his knee. Coupled with the complete absence of any other evidence of abuse, there was the great weight of evidence this Court heard that Joshua and Brenda Burns were loving, caring, and highly responsible parents to Naomi.

Mr. Burns knows well that the judge's power to grant a new trial on great weight should be used extremely sparingly. This, however, is a case that cries out for that remedy.

CONCLUSION

For these reasons, Defendant, Joshua Burns respectfully requests that this Court hold an evidentiary hearing on the ineffective assistance of counsel claims in this motion and, after that hearing, grant a new trial.

Respectfully submitted,

Dated: September 28, 2015

David A. Moran (P45353)
Attorney for Defendant

Caitlin Plummer (P78086)
Attorney for Defendant

Ben St. Pierre
Student Attorney for Defendant

Alex M. Johnson
Student Attorney for Defendant

Osahon Okundaye
Student Attorney for Defendant

Exhibit A

Dr. Bethany Mohr's Email Correspondence with Dr. Alex Levin

April 2-5, 2014

Lofgren, Luke

From: Alex Levin <ALevin@willseye.org>
Sent: Saturday, April 05, 2014 11:06 PM
To: Mohr, Bethany (Bethany)
Subject: RE: Tough Case

Do you mean thrombocytosis?
Either way we have no idea what this might do re retinal bleeding and could be considered to throw the retinal findings into question. We just don't know

Alex V. Levin, MD, MHSc, FRCSC

Chief, Pediatric Ophthalmology and Ocular Genetics

Wills Eye Institute, Ste. 1210

840 Walnut Street

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Phone: 215-928-3914 for all other matters

Fax: 215-928-3983

Email: alevin@willseye.org

Professor, Departments of Ophthalmology and Pediatrics

Jefferson Medical College of Thomas Jefferson University

From: Mohr, Bethany (Bethany) [mailto:bamohr@med.umich.edu]
Sent: Thursday, April 03, 2014 5:51 PM
To: Alex Levin
Subject: Re: Tough Case

Thanks--they did a really nice job!
My question was mainly about what to say (if anything) about the thrombophilia.

Sent from my iPhone

On Apr 3, 2014, at 5:15 PM, "Alex Levin" <ALevin@willseye.org> wrote:

Impressive documentation. Very well done.

Not sure what the question is. I can't think of another diagnosis other than abuse assuming no obvious coagulopathy or other other event

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Email: alevin@willseye.org

Professor, Departments of Ophthalmology and Pediatrics
Jefferson Medical College

On Apr 2, 2014, at 1:53 PM, "Mohr, Bethany (Bethany)" <bamohr@med.umich.edu> wrote:

Hi Alex,

I recently evaluated an 11 week-old female infant who presented with vomiting, apnea and hypothermia; who, later, was found to have right-sided seizure activity. MRI done initially was read as "normal" except for bifrontal enlarged extraaxial spaces. No infectious etiology identitied; CMV, HSV, etc. negative. Discaharged and clinical presentation/event attributed to viral gastroenteritis with provoked seizures.

She was discharged after 6 days but presented again, only hours later, with apnea. No further electrographic seizures noted. Quickly began doing well. Extensive metabolic workup continued; ophthalmologic evaluation done to look for Glycogen Storage Disease.

But, instead, RH found! MRI re-read with subdural fluid consistent with chronic SDH; and posterior parietal and cerebellar SDH noted (based upon T1/T2 on MRI, about 4-7 days old).

Had difficult birth—unsuccessful VAVD; eventually delivered by C/S.

If you have time, can you please take a look at the attached images—photos taken 1 day after initial bedside exam and 9 days after initial presentation; 11 days after vomiting started. My guess is that hemorrhages occurred prior to initial presentation.

Per Ophthalmology Report (exam under anesthesia): On the day of surgery, the patient was brought to the operating room at the Mott Children's Hospital. After verification of correct side of operation, a lid speculum was inserted into the right

eye. She was already intubated due to an MRI procedure which was done earlier. Intraocular pressure measured 8 mmHg. Examination of the anterior segment with portable slit lamp showed a clear cornea with a deep anterior chamber and a round and dilated iris. There was no iris neovascularization. The lens was clear. Anterior vitreous was unremarkable. Examination of the posterior segment with indirect ophthalmoscopy using a 28 as well as a 20 diopter lens showed diffuse retinal hemorrhages which were distributed intraretinally as well as preretinally. There were a few areas of possible subretinal hemorrhage as well. The optic nerve was pink and flat. Vasculature was somewhat dilated and tortuous. Retinal hemorrhages extended all the way to the ora which were seen on scleral depression. There was no vitreous hemorrhage. The fovea was clear of any hemorrhage in the right eye. Lid speculum was then placed in the left eye and anterior segment examination showed a clear cornea with a deep anterior chamber. Iris was round and dilated and no neovascular tissue was seen on the iris. Lens was clear. The anterior vitreous was unremarkable. Intraocular pressure in the left eye measured 7 mmHg. Examination of the posterior segment showed clear posterior vitreous. There was no evidence of vitreous hemorrhage. Optic nerve was pink and flat. The vasculature was somewhat dilated and tortuous. Again, similar to the right eye, there were extensive preretinal as well as intraretinal hemorrhages throughout the entire fundus. The hemorrhages extended all the way to the ora for 360 degrees on scleral depression. Following examination, fundus photography was performed with RetCam 130 degree lens as well as 80 degree lens. The fundus photography demonstrated the retinal hemorrhages as well as vasculature tortuosity in both eyes. Fluorescein angiogram was then performed using fluorescein with a concentration of 7.7 mg/kg. The angiogram demonstrated normal arterial and venous filling. There were numerous areas of focal block of fluorescein secondary to preretinal hemorrhages. Choroidal filling was within normal limits with a few focal areas of blockage due to intraretinal and subretinal hemorrhages in both eyes. In the late stages of the angiogram, no leakage was seen. However, in the periphery the vasculature was dilated and tortuous. There was no evidence of any significant retinal ischemia or capillary drop out in either eye. Following angiogram, both eyes were rinsed with BSS solution. The patient was then returned to the recovery room in stable condition.

Of note, electrolytes always normal; but, persistent thrombophilia, 600,000s-900,000s.

Your thoughts would be much appreciated.

Thanks, Bethany

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Medical Director, Child Protection Team
Division of Hospital Medicine
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****

Electronic Mail is not secure, may not be read every day, and should not be used for urgent or sensitive issues

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Sent: Thursday, April 03, 2014 5:16 PM
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>
> Per Ophthalmology Report (exam under anesthesia): On the day of surgery, the patient was

brought to the operating room at the Mott Children's Hospital. After verification of correct side of operation, a lid speculum was inserted into the right eye. She was already intubated due to an MRI procedure which was done earlier. Intraocular pressure measured 8 mmHg. Examination of the anterior segment with portable slit lamp showed a clear cornea with a deep anterior chamber and a round and dilated iris. There was no iris neovascularization. The lens was clear. Anterior vitreous was unremarkable. Examination of the posterior segment with indirect ophthalmoscopy using a 28 as well as a 20 diopter lens showed diffuse retinal hemorrhages which were distributed intraretinally as well as preretinally. There were a few areas of possible subretinal hemorrhage as well. The optic nerve was pink and flat. Vasculature was somewhat dilated and tortuous. Retinal hemorrhages extended all the way to the ora which were seen on scleral depression. There was no vitreous hemorrhage. The fovea was clear of any hemorrhage in the right eye. Lid speculum was then placed in the left eye and anterior segment examination showed a clear cornea with a deep anterior chamber. Iris was round and dilated and no neovascular tissue was seen on the iris. Lens was clear. The anterior vitreous was unremarkable. Intraocular pressure in the left eye measured 7 mmHg. Examination of the posterior segment showed clear posterior vitreous. There was no evidence of vitreous hemorrhage. Optic nerve was pink and flat. The vasculature was somewhat dilated and tortuous. Again, similar to the right eye, there were extensive preretinal as well as intraretinal hemorrhages throughout the entire fundus. The hemorrhages extended all the way to the ora for 360 degrees on scleral depression. Following examination, fundus photography was performed with RetCam 130 degree lens as well as 80 degree lens. The fundus photography demonstrated the retinal hemorrhages as well as vasculature tortuosity in both eyes. Fluorescein angiogram was then performed using fluorescein with a concentration of 7.7 mg/kg. The angiogram demonstrated normal arterial and venous filling. There were numerous areas of focal block of fluorescein secondary to preretinal hemorrhages. Choroidal filling was within normal limits with a few focal areas of blockage due to intraretinal and subretinal hemorrhages in both eyes. In the late stages of the angiogram, no leakage was seen. However, in the periphery the vasculature was dilated and tortuous. There was no evidence of any significant retinal ischemia or capillary drop out in either eye. Following angiogram, both eyes were rinsed with BSS solution. The patient was then returned to the recovery room in stable condition.

Of note, electrolytes always normal; but, persistent thrombophilia, 600,000s-900,000s.

Your thoughts would be much appreciated.

Thanks, Bethany

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Medical Director, Child Protection Team
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Exhibit B

Tawansy Report

August 7, 2014

PRIVILEGED AND CONFIDENTIAL
ATTORNEY WORK PRODUCT
DRAFT

Khaled A. Tawansy, M.D.

August 7, 2014

Matter of Naomi Burns

Dear Counsel,

Upon your request I have reviewed the medical records, Ret-Cam eye images, ophthalmology notes, brain imaging, and delivery records pertaining to Naomi Burns DOB 01/01/04. I have reviewed in detail Naomi's hospitalization at the University of Michigan Medical Center. I have been specifically asked to evaluate the possibility of child abuse and determine the significance of the retinal hemorrhages.

I enclose below a summary of the facts and my findings. I reserve my rights to revise my findings should additional information become available.

By way of background, I am a board certified ophthalmologist with fellowship training in pediatric retinal disorders and surgery. Since 1997, I have been director of a clinical program specializing in the management of complex retinal problems in children, including retinopathy of prematurity, hereditary retinal vascular diseases, shaken baby syndrome, trauma, retinal detachment, and retinal hemorrhages of various causes. I see hundreds of such patients every week, perform necessary imaging studies, exams under anesthesia, and surgeries. I have done research on the patterns of retinal hemorrhages in infants from different etiologies, and I am regularly asked by courts throughout the country to determine the medical probability of child abuse. When I review these cases, I always look at the entire medical history of the child, including follow up information after discharge from the hospital which is not available to the intensive care specialists in the acute setting. My CV is attached to this letter as Exhibit A.

The following is a summary of my medical assessment of this case:

1. Naomi was born at term via cesarean section after a second stage arrest. There was preceding 3.5 hours of labor and attempt at extraction by applying vacuum to the scalp over four contractions without success. The trauma to the head associated with vacuum extraction causes subdural hematoma in a significant percentage of cases.
2. Within her first weeks of life Naomi had episodes of emesis that were diagnosed as gastroenteritis but these may also be attributable to intra-cranial hemorrhage that was at that time undiagnosed.
3. Patients with subdural or subarachnoid hemorrhage early in life are prone to developing organized fibrovascular membranes as the blood clears. There was evidence of such membranes on Naomi's MRI studies at the University of Michigan. These membranes are fragile and have a propensity to cause repeated hemorrhage with minor or incidental head trauma. The events preceding Naomi's decline in mentation

with respiratory failure and possible seizures are compatible with minor head trauma that could lead acute bleeding and a rise of intra-cranial pressure.

4. The brain imaging studies do not reveal cerebral cortical injury or axonal edema and disruption of the type that occurs with abuse head trauma or angular acceleration/deceleration. The imaging studies only show bilateral subdural hematomas less than 1 cm in maximal thickness with mass effect.
5. The retinal hemorrhages that were seen by the ophthalmologist at University of Michigan and documented by Ret-Cam imaging were predominantly superficial (sub internal limiting membrane or nerve fiber layer or intra-retinal.) Although these types of hemorrhages can occur with abusive head trauma or shaking injury, they are not specific to that mechanism. In fact they occur regularly with abrupt elevations of intra-cranial pressure (as in acute subdural hematoma) when the pressure in the cerebrospinal fluid surrounding the optic nerve exceeds the pressure of venous return in the retina as it drains into the optic nerve.
6. Ocular findings that are more specific to shaking injury include vitreous base avulsion or dis-insertion, optic nerve edema and atrophy, retinal hemorrhages extending deep into the sub-retinal and sub-retinal pigment epithelial spaces, retinal pigment epithelial disruption and clumping, retinal splitting (retinoschisis), and retinal vascular narrowing with peripheral non-perfusion. These findings are permanent changes that can be seen well after the blood clears and are associated with long-term visual morbidity. None of these features were seen in Naomi.
7. Fluorescein angiography was performed on Naomi, an imaging study of the retina that allows more detailed assessment of the location of bleeding and blood flow. It did not show non-perfusion of the periphery or deep retinal hemorrhages and retinal pigment epithelial alteration, features that if present would have supported the diagnosis of shaking injury or non-accidental trauma.
8. Follow up examinations of Naomi after discharge from the hospital reveal essentially normal neurologic and visual function with healthy appearing retinas and optic nerve. In specific there is no optic atrophy, pigment alteration, or vitreous degeneration. A significant shaking injury would be expected to leave a long-term footprint in the retinal appearance and some limitation in function which was not present.
9. A review of the medical and social records reveals that the parents behaved responsibly in caring for Naomi and seeking appropriate medical care for her.

To summarize, although upon first review this case may appear as child abuse because of the combination of retinal and subdural hemorrhage in association with declining mental status and respiratory failure, the medical facts of this case lead to a more medically plausible explanation. The circumstances of Naomi's birth and subsequent admission with subdural hemorrhage can be attributed to her vacuum delivery, and there is nothing specific about the retinal findings to suggest the angular acceleration-deceleration injury of shaking.

I may be reached to discuss this matter at any time on my cell phone 323-313-5757.

Respectfully submitted,

Khaled A. Tawansy, M.D.
Director, Children's Retina Institute of California
Associate Professor of Ophthalmology and Pediatrics

Exhibit C

Affidavit of Michael J. Cronkright

September 27, 2015

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF LIVINGSTON

PEOPLE OF THE STATE OF MICHIGAN,

Plaintiff,

v.

No. 14-022070-FH
Hon. Miriam A. Cavanaugh

JOSHUA QUINCY BURNS,

Defendant
_____/

AFFIDAVIT OF MICHAEL J. CRONKRIGHT

BEFORE ME, the undersigned Notary, Alesha Quinton, on this day of September 27, 2015, personally appeared Michael J. Cronkright, who being by me first duly sworn, on his oath, deposes and says:

1. I am a licensed attorney, and I represented Joshua Burns in both the criminal and the neglect and abuse trials held in this Court in 2014 and 2015 relating to allegations that Mr. Burns had committed child abuse against his daughter, Naomi Burns.

2. The primary evidence against Mr. Burns in the criminal case was the testimony of Dr. Bethany Mohr, a child abuse pediatrician.

3. Going into the trial, I knew from her reports and her prior testimony that she would testify that Naomi Burns' symptoms, especially her retinal hemorrhages, were highly specific for child abuse through shaking, impact or a combination of shaking and impact (or, as Dr. Mohr put it, "repetitive acceleration deceleration").

4. I also knew from reading expert reports, conducting the neglect and abuse trial, and consulting with my own defense witnesses before the criminal trial, including child abuse

pediatrician Dr. Marcus DeGraw, pediatrician Dr. Stephen Guertin (a member of Sparrow Hospital's child abuse team), ophthalmologist Dr. Khaled Tawansy, neurologist Dr. Joseph Scheller, and pediatric neuroradiologist Dr. Patrick Barnes, that other highly-qualified medical experts would vigorously disagree with Dr. Mohr that Naomi's retinal hemorrhages were very specific or highly specific for child abuse.

5. Based on the weight of those opinions from highly-qualified experts and the deficiencies in any literature that could arguably support Dr. Mohr's opinion, I believe I had a basis under MRE 702 to challenge the admissibility of Dr. Mohr's opinion that Naomi's retinal hemorrhages were specific to child abuse.

6. Upon review of a portion of the transcript, I specifically conclude that I should have objected to Dr. Mohr's rebuttal testimony in response to a juror note in which she opined that Naomi's symptoms were "highly, highly specific" to abuse and "probably close to 100%" diagnostic of abuse if a motor vehicle accident and a severe crush injury were excluded. Although I don't specifically recall this testimony, it appears from a review of the transcript that I objected as her answer was in progress after Dr. Mohr indicated that she did not have a percentage (which was the question asked.) At that point, Dr. Mohr added the "100%" comment. Upon review, it is my belief that I should have further objected and asked for a curative instruction.

7. I knew before the criminal trial that Dr. Mohr had consulted via e-mail with ophthalmologist Dr. Alexander Levin about the significance of Naomi's retinal hemorrhages to her diagnosis of abusive head trauma. An portion of the e-mail exchange was introduced for a limited purpose during the neglect and abuse trial in which Dr. Mohr asked Dr. Levin what effect Naomi's thrombocytosis (elevated platelet count) would have on the diagnosis. Dr. Levin

responded that "we have no idea what this might do re retinal bleeding and could be considered to throw the retinal findings into question. We just don't know." Dr. Mohr apparently ended the exchange at that point.

8. I knew before the criminal trial, specifically from my consultations with Dr. Gregory Shoukimas, that a radiologist was available to refute Dr. Mohr and Dr. Quint's testimony regarding the causation of the bleeding in the extracerebellar space. In particular, Dr. Shoukimas opined that venous thrombosis was a more likely explanation than trauma. He also opined that trauma was an unlikely cause given the lack of bleeding in the extracerebral subdural space, where the veins would have been particularly susceptible to rupture with trauma. For this reason, I believe calling a radiologist at the criminal trial would have been consistent with my defense, and potentially beneficial.

9. I attempted during my cross-examination of Dr. Mohr to introduce the above referenced e-mail exchange during the criminal trial. When the prosecutor's hearsay objection was sustained, in order to fully preserve the issue for appeal, I should have made an offer of proof, and I also should have argued to the Court that the e-mail exchange was admissible not for the truth of the matter asserted but as impeachment evidence to show the deficiencies in Dr. Mohr's diagnostic procedures.

10. Before trial, I made a written motion to have the Court define the term "reckless" in the second-degree child abuse statute, and I argued the motion at a motion hearing. The Court denied my motion before the start of the trial. I believe that I fully preserved the issue for appeal and therefore did not need to object again when the Court actually delivered the jury instructions at the close of the trial.

MICHAEL J. CRONKRIGHT

Dated: September 27, 2015