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 IN THE \_\_\_\_\_\_\_\_\_DISTRICT COURT OF [COUNTY]

 STATE OF UTAH

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STATE OF UTAH, : FINDINGS OF FACT, CONCLUSIONS

 OF LAW, AND ORDER RE:

 MOTION TO EXCLUDE EXPERT WITNESS

Plaintiff, : TESTIMONY AND STATE’S MOTION IN

 LIMINE

-v- :

[DEFENDANT], : Case No.

Defendant. : Judge

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The Defendant in this matter filed a Motion to Exclude “Shaken Baby Syndrome” and Other Unreliable Expert Testimony Regarding Cause, Manner, and Timing of Injury on or about the [DATE]. The State filed a Memorandum in Opposition to Motion to Exclude and later filed Supplemental Authorities to State’s Response to Motion to Exclude. The Court now enters the following:

 FINDINGS OF FACT

1. The opinions of [STATE’S EXPERTS] relating to the cause, manner and timing of injuries to [VICTIM]. are based upon solid grounds, as explained by their testimony during the Rule 702 hearing.

2. Although there may be some disagreement in the medical field concerning the scientific basis of the diagnosis of “Abusive Head Trauma” and its subset, the “shaken baby syndrome”, there has been credible evidence that this diagnosis is still generally accepted by the relevant expert community, including pediatric ophthalmology and pediatrics. No evidence was presented to the Court that these diagnoses were no longer generally accepted.

3. The primary disagreement in the medical field as to the “shaken baby syndrome” is whether shaking an infant or toddler human’s head violently and repeatedly can cause subdural hemorrhages and/or damage to the eyes in the absence of impact trauma applied to the child’s head. That issue is not pertinent to the facts of this case, because there is clear evidence that D.A.’s head was impacted, and the parties are not disputing that fact.

4. [STATE’S EXPERT] explained that in his opinion, D.A.’s retinal hemorrhages in his right eye, which extended into multiple layers of the retina, but which were confined to the posterior pole of that eye, is consistent with non-accidental trauma by shaking or at least significant or severe head trauma. It was [STATE’S EXPERT] further opinion that these retinal hemorrhages were not consistent with having been caused by a simple fall where the child toppled over from his own height. [STATE’S EXPERT] fully explained the underlying basis for these opinions, and referred to well over one hundred articles he had reviewed which supported these views.

5. [STATE’S EXPERT] explained that in her opinion, the subdural hemorrhage found overlying D.A.’s brain and layered along his falx membrane which separates the two upper hemispheres of the brain was the result of motion of the brain back and forth within the cranial cavity, which caused the bridging veins leading to his central vein at the top of his head to shear. Her opinion was that there was no indication of a subdural hemorrhage at the point of any head impact, and that this presentation of blood overlying the brain was not consistent with D.A. toppling over from his own height, or with any type of impact to the head. In her opinion, the child had suffered a concussive trauma to the brain and all of D.A.’s eye and head injuries were caused by abusive head trauma, specifically acceleration and deceleration of the brain from shaking. [STATE’S EXPERT] also explained that the bruise to the “pinna” of D.A.’s right ear was caused by something impacting his whole ear and pressing it firmly against the side of his skull, and that injury was not consistent with an alleged fall against a wall. [STATE’S EXPERT] also explained the bases of her opinions and that the underlying principles supporting those opinions were generally accepted among those who specialize in working with pediatric patients.

6. The principles underlying the opinions of [STATE’S EXPERTS] have been the subject of a great deal of peer-reviewed research and the Court acknowledges that work continues in the field to validate the principles, although as all experts conceded no experimentation can be conducted on living human children to ultimately answer the questions raised. The Court heard substantial evidence concerning “finite element” studies that are attempts to replicate the basic properties of living human tissues, then using those properties have a computer simulate the effects of various biomechanical loads on those tissues. Early results of those studies show that both retinal hemorrhages of the type identified by [STATE’S EXPERT] and subdural bleeding over the brain can be caused by rotational forces applied to the heads of human children.

7. The American Academy of Pediatrics and the American Academy of Ophthalmology, among others, have within the last two years affirmed that certain finding within the heads and eyes of young human children are highly indicative of inflicted head trauma, meaning trauma caused by other persons or “non-accidental” trauma. Both organizations continue to support the view that violent and sustained shaking of a young child’s head can cause brain damage, bleeding over the brain, and ocular damage of a particular type. No evidence was received by the Court which undercuts the consensus reflected in the position statements taken by such organizations.

8. No evidence was presented to this Court which establishes that there has been a shift in opinion among those who regularly work with pediatric patients in the medical field, such that there is a lack of general acceptance of the principles underlying the concepts of “abusive head trauma” or its subset, “shaken baby syndrome.”

 CONCLUSIONS OF LAW

Based upon the foregoing Findings of Fact, the Court concludes:

1. As both parties agree, this Motion is covered by Rule 702 of the Utah Rules of Evidence, as modified in 2007. Pursuant to Rule 702(a), the Court finds that the expert testimony offered in this case will in fact assist the jury in understanding the evidence and the facts in issue.

2. The Defendant has not established that the “shaken baby syndrome” or the other explained bases of the State’s expert witnesses are inadmissible under the provisions of Rule 702 of the Utah Rules of Evidence, as amended in 2007.

3. The opinions of [STATE’S EXPERTS] concerning the cause, manner and timing of the injuries to D.A., as explained by those expert witnesses during the evidentiary hearing, are admissible at the trial of this matter as they are based upon generally accepted and scientifically reliable principles and those principles were reliably applied to the facts of this case. The Defendant’s Motion to Exclude Shaken Baby Syndrome and Other Unreliable Expert Testimony Concerning Cause, Manner and Timing of Injury is hereby denied.

4. [STATE’S EXPERT] is a fully qualified Pediatric Ophthalmologist and his expert testimony will be admitted in the trial of this matter. [STATE’S EXPERT] may testify that the retinal hemorrhages observed in D.A. are consistent with non-accidental trauma, either by shaking or by other severe head trauma and that D.A. toppling over and hitting his head on a toy would not be expected to result in the type of retinal hemorrhages observed in this child. [STATE’S EXPERT] may further testify, as he did during the evidentiary hearing, to the scientific basis underlying his opinions.

5. [STATE’S EXPERT] is a fully qualified Child Abuse Pediatrician, with substantial experience in her career assessing the cause, manner and timing of injuries to young children. She may testify that D.A. suffered from abusive head trauma, likely from shaking or violent rotation of his head and further that D.A.’s ear bruising is consistent with having been inflicted by some other person. [STATE’S EXPERT] may further testify, as she did during the evidentiary hearing, as to the underlying basis of her opinions in this case.

6. The State has met its burden of establishing that the opinions of [STATE’S EXPERTS] and the underlying bases of those opinions as to the cause, timing and manner of the injuries to D.A. are both generally accepted in the relevant medical community and meet the threshold of reliability as set out in Rule 702(b) and (c). The factual bases for those opinions were well explained by each of the experts through their testimony on [DATE] and further in cross-examination of those experts on [DATE]. In summary, each expert explained why they felt the nature of the injuries suffered by D.A. made it likely that the child suffered trauma inflicted by some other person rather than caused by accident, and each explained why they believed the accidental explanation provided by the Defendant was not adequate to explain D.A.’s injuries.

7. The underlying bases of the opinions of [STATE’S EXPERTS] are scientific principles which are generally accepted in the relevant medical community, as fully developed by the memoranda of the parties and the supporting materials provided to the Court and the testimony of the State’s experts. Thus, under Rule 702(c) the Court finds that the bases of the expert’s opinions as fully set forth during the evidentiary hearing and in the supporting materials provided to the Court, allow the Court to take judicial notice that the principles are generally accepted in the relevant scientific community.

8. The Court further finds that even if the underlying bases of those opinions were not subject to a finding of general acceptance, those principles are reliable and are based upon sufficient peer-reviewed research to be an adequately reliable basis for the State’s expert opinions as applied to the facts of this case, and pursuant to Rule 702(b) of the Rules of Evidence.

9. The Court incorporates by reference the authorities cited by the State on pages 15-25 of its Memorandum in Opposition to Motion to Exclude and on pages 1-7 of its Supplemental Authorities to State’s Response to Motion to Exclude in support of the Court’s finding that the principles underlying the State’s Expert’s opinions are reliable, are based upon sufficient facts and data, and have been reliably applied to the facts of D.A.’s case.

10. While there is some debate about the ultimate accuracy of the principles underlying the medical diagnosis of abusive head trauma, that debate is not of a magnitude as to establish that opinions on either side of the issue do not meet the threshold for admissibility under Rule 702 of the Utah Rules of Evidence, as further explained by the Advisory Committee Notes to that Rule adopted in November of 2007. As those Advisory Committee notes indicate, “the threshold” requires only a basic foundational showing of indicia of reliability for the testimony to be admissible, not that the opinion is indisputably correct. When a trial court, applying this amendment, rules that an expert’s testimony is reliable, this does not necessarily mean that contradictory expert testimony is unreliable.”

11. Indeed, in this case, the Court specifically finds that [DEFENSE EXPERT] will be allowed to testify as an expert witness for the defense and that he provided a sufficient basis for his conclusions based upon his review of the medical literature. To that extent, the State’s Motion in Limine regarding [DEFENSE EXPERT] testimony is denied. The Court notes, however, that the State is not precluded from raising objections at the trial of this matter concerning the issue of whether [DEFENSE EXPERT] is adequately qualified to offer opinions as to the cause of D.A.’s eye injuries..

 Dated this \_\_\_\_ day of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_.

 By the Court:

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 JUDGE

 ORDER

WHEREFORE, IT IS HEREBY ORDERED that the Defendant’s Motion to Exclude Shaken Baby Syndrome and Other Unreliable Expert Testimony Regarding Cause, Manner and Timing of Injury is denied.

IT IS FURTHER ORDERED that the State’s Motion in Limine as to the testimony of [DEFENSE EXPERT] is denied, however the State may raise appropriate objections at trial concerning whether [DEFENSE EXPERT] is qualified to express expert opinions concerning ocular injuries in D.A.

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Dated this \_\_\_\_\_\_ day of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_.

 By the Court:

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 JUDGE