



### F44 You Are the Judges! An Interactive Session in Forensic Medicine and Pathology on the Admissibility of Scientific Evidence in Shaken Baby Syndrome (SBS) and Abusive Head Trauma (AHT) Cases

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**Learning Overview:** After attending this presentation, attendees will better understand the trial court's admissibility standards regarding expert testimony through interactive audience participation of the application of these standards in several case studies regarding forensic pathology issues.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by increasing the knowledge of the factors for admitting scientific evidence in several specific case situations in the area of forensic pathology in both *Daubert* and *Frye* jurisdictions.<sup>1,2</sup>

Understanding the role of judges as gatekeepers will assist attendees in this session with comprehending and appreciating the critical admissibility decisions judges make as gatekeepers of scientific evidence in our courtrooms. *Daubert v. Merrell Dow Pharmaceuticals, Inc.* is the leading case regarding this gatekeeper role of admissibility decision-making.<sup>1</sup> The United States Supreme Court in *Daubert* defined the judge's role as a gatekeeper for admitting scientific knowledge to assist the triers of fact in understanding the evidence. Judges should admit conclusions that will qualify as scientific knowledge if the proponents of such evidence can demonstrate such conclusions are the products of sound scientific methodology derived from the scientific method. In order to be admissible, this evidence must be reliable and relevant. Understanding the expert's methodology is critical to effective, efficient, and proper judicial gatekeeping.

In explaining this evidentiary standard, the *Daubert* Court provided several factors for trial judges to consider: (1) whether a theory or technique can be (and has been) tested, (2) whether the theory or technique has been subjected to peer review and publication, (3) the known or potential rate of error of a particular scientific technique, (4) the existence and maintenance of standards controlling the technique's operation, and (5) a scientific technique's degree of acceptability within relevant scientific communities. The *Daubert* Court also emphasized that these five factors under Federal Rule of Evidence 702 are applied by trial judges in a flexible manner. Trial judges have great discretion in deciding on the admissibility of evidence under Federal Rule of Evidence Rule 702 and appeals from *Daubert* rulings are subject to a very narrow abuse-of-discretion standard of review.

Moreover, Federal Rule of Evidence 702 requires the following for expert testimony: A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if: (1) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (2) the testimony is based on sufficient facts or data; (3) the testimony is the product of reliable principles and methods; and (4) the expert has reliably applied the principles and methods to the facts of the case.

Also, under Federal Rule of Evidence 403, the trial judge may exclude relevant evidence if its probative value is substantially outweighed by the danger of unfair prejudice, confusing the issues, misleading the jury, undue delay, wasting time, or needlessly presenting cumulative evidence. Federal case law recognizes certain situations call for exclusion of evidence that is of unquestioned relevance. These situations entail risks ranging from inducing decisions on purely emotional bases to confusing or misleading jurors. Trial judges must balance the probative value of and need for this evidence against the harm likely to result from admitting said evidence.

Several state courts still apply the *Frye* standard instead of the *Daubert* standards. Trial judges in *Frye* jurisdictions in essence defer to the scientists and admit expert opinion based on scientific techniques only when the techniques are generally accepted as reliable in the relevant scientific community.

This presentation intends to focus this session on teaching participants to apply the trial courts' admissibility standards regarding expert testimony through the vehicle of interactive audience participation. This presentation will examine SBS and AHT cases under various court rules and case law to examine how courts make decisions on expert testimony in actual court cases. This presentation will address issues such as: How are SBS and AHT presented in the courtroom? Should expert testimony regarding SBS be admitted as scientific evidence to show that the baby's injuries were intentional? What are the clinical findings by experts in these cases? Is SBS considered by the courts as junk science? Can SBS cause fatalities and what does the scientific research indicate? Are these concepts acceptable in *Frye* states?

#### Reference(s):

<sup>1</sup> *Daubert v. Merrell Dow Pharmaceuticals*. US Supreme Court 509.U.S.579,113S.Ct.2786, 125L. Ed.2d 469. 1993.

<sup>2</sup> *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923).

#### *Daubert*, Admissibility, Pathology