

PREPARING AND PRESENTING EXPERT TESTIMONY  
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## **I. PREPARATION OF THE EXPERT**

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The trial attorney's focus in preparing an expert is quite different from the job of presenting that expert's testimony to a trier of fact. The law applicable to qualifying an expert, reciting an expert's specialized methodology, providing a report of the expert's findings, and ensuring the expert's testimony is relevant to the case can often run counter to the efficient presentation of that expert's testimony at trial.

The first part of this paper will discuss the legal aspects of expert testimony which are most useful in shepherding the expert's opinion through the qualification and methodology necessary to protect that opinion from legal challenge. The latter part of the paper and about one-half of the presentation will address considerations counsel should consider when presenting expert testimony.

The decision of a judge or jurors who decide a case mostly depends upon the testimony of witnesses and exhibits introduced at trial. Many lay witnesses testify as to facts, but sometimes, because of the difficulty in distinguishing between fact and opinion, a lay witness may provide opinion testimony if it is (1) reasonably based upon the witness's perception, and (2) helpful to a clear understanding of the witness's testimony.<sup>i</sup>

But some opinions are based on more than the witness's perception. A witness may have an opinion because of skill, knowledge, education, experience, or training which allows that witness to make a reliable inference about pertinent facts in the case. When this happens that witness, an expert, may testify in the form of an opinion if certain criteria are met. Admission of expert testimony is proper if:

- (1) the expert is qualified to testify competently regarding the matters he intends to address;
- (2) the methodology by which the expert reaches his conclusions is sufficiently reliable as determined by the sort of inquiry mandated in *Daubert*, and
- (3) the testimony assists the trier of fact, through the application of scientific, technical, or specialized expertise, to understand the evidence or to determine a fact in issue.<sup>ii</sup>

### **A. Qualification**

A judge is allowed "much discretion" in determining whether a witness is qualified to be an expert.<sup>iii</sup> Preliminary questions concerning the competency or qualification of an expert witness are determined by the court outside of the presence of the jury and are not subject to the rules of evidence. La. Code Evid. art. 104.

## B. The Evolution of Daubert in Federal Court

For seventy years the case of *Frye v. United States*<sup>iv</sup> controlled the admissibility of expert scientific evidence in federal courts. Courts applying *Frye* typically limited its application to so-called “black box” testimony, i.e. machines, devices, or techniques that authoritatively and automatically decide outcome-determinative “truths,”<sup>v</sup> since such testimony has the aura of infallibility and thus the potential to overawe the jury.<sup>vi</sup>

The *Frye* court affirmed the trial court’s refusal to allow a scientist’s testimony about a criminal defendant’s test results from a predecessor of a polygraph machine stating that before admitting expert scientific testimony “the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs.” For the most part, U.S. courts only applied the *Frye* test in criminal cases.<sup>vii</sup> And *Frye* did not stand as a roadblock to the admissibility of scientific expert testimony, being cited less than one hundred times in federal and state cases until 1975.<sup>viii</sup> But as the litigation use of diverse kinds of expert testimony dramatically increased, business and industry groups clamored for additional screening of expert scientific testimony.

In the 1993 case of *Daubert v. Merrell Dow Pharmaceuticals, Inc.*,<sup>ix</sup> the United States Supreme Court considered whether *Frye* survived the 1975 adoption of Federal Rule of Evidence 702. The rule, since changed, provided:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education may testify thereto in the form of an opinion or otherwise.

The court held Rule 702 superceded *Frye*’s “rigid” requirement that testimony based on a scientific methodology or technique was admissible only if it had achieved “general acceptance” in the relevant field. The *Daubert* decision recognized Rule 702’s “liberal thrust” and its “general approach of relaxing the traditional barriers to opinion testimony.” The decision directs trial courts to assess whether proffered testimony or evidence admitted at trial is not only relevant but reliable.<sup>x</sup>

According to *Daubert*, trial courts should make a “preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue.”<sup>xi</sup> The court referenced five factors that should guide the trial court’s decision. It emphasized none of the factors was indispensable and the overall inquiry is a flexible one. The “nondefinitive checklist” directs trial courts to evaluate:

- (1) whether the expert’s technique or theory can be or has been tested - that is, whether the expert’s theory can be challenged in some objective sense, or whether it is instead simply a subjective, conclusory approach that cannot reasonably be assessed for reliability;
- (2) whether the technique or theory has been subject to peer review and

publication;

- (3) the known or potential rate of error of the technique or theory when applied;
- (4) the existence and maintenance of standards and controls; and
- (5) whether the technique or theory has been generally accepted in the scientific community.

Over the next seven years, the U. S. Supreme Court addressed the admissibility of expert testimony three more times. In *General Electric Co. v. Joiner*<sup>xii</sup> the court held that appellate courts must apply the highly deferential “abuse of discretion” standard to trial court rulings admitting or excluding scientific evidence. The *Joiner* court also allows federal trial courts to examine the relationship between an expert’s methodologies and conclusions, stating that they “are not entirely distinct from one another.” The court concluded that a trial court must not “admit opinion evidence which is connected to existing data only by the *ipse dixit* of the expert.”<sup>xiii</sup>

The supreme court concluded in *Kumho Tire Co. v. Carmichael*<sup>xiv</sup> that Rule 702 mandates all types of expert evidence are subject to the “gatekeeping” requirements of *Daubert*. *Kumho* contains language helpful to plaintiffs in that it reemphasized the five *Daubert* factors could not always be used to evaluate the reliability and admissibility of all types of expertise. Trial courts should have broad discretion to devise alternative tests for “determining whether particular expert testimony is reliable.”<sup>xv</sup> It is not necessary that all, or even one, of the *Daubert* factors be satisfied for the testimony to be admissible. Expert testimony from historically reliable disciplines which conforms to the standards associated with those disciplines shall be freely admitted. Conclusions consistent with commonly used methodologies will be admissible when drawn “from a set of observations based on extensive and specialized experience.”<sup>xvi</sup> And most significantly, trial courts may use discretion “to avoid unnecessary ‘reliability’ proceedings in ordinary cases when the reliability of the expert’s methods is properly taken for granted.”<sup>xvii</sup> The court emphasized that the best gauge for assessing whether expert testimony is reliable is whether the expert employs in the courtroom the “same level of intellectual rigor that characterizes the practice of an expert in the relevant field.”<sup>xviii</sup>

In *Weisgram v. Marley Co.*,<sup>xix</sup> the court ruled that an appellate court reversing a trial court’s decision to admit an expert’s testimony need not remand the case to allow that party a second chance to cure what the appellate court regarded as unreliable evidence. Thus, the party affected by the exclusion of the evidence may not be permitted to reexamine the disqualified expert so as to provide a satisfactory explanation of his methodologies’ reasonings and conclusions. Further, the party harmed by the appellate decision to exclude testimony may not be permitted to find other experts who can validate or cure the excluded expert’s work.

Rule 702 was amended in 2000 in response to *Daubert* and *Kumho*.<sup>xx</sup> Rule 702 now provides:

If scientific, technical, or other specialized knowledge will assist the trier of fact

to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, *if (1) the testimony is based upon 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.*

The italicized language “affirms the trial court’s role as gatekeeper and provides some general standards that the trial court must use to assess the reliability and helpfulness of proffered expert testimony.”<sup>xxxi</sup> The committee notes on amended Rule 702 make plain that the rejection of expert testimony is the exception rather than the rule. *Daubert* did not work a “seachange over federal evidence law,” and “the trial court’s role as gatekeeper is not intended to serve as a replacement for the adversary system.”<sup>xxxi</sup>

### C. *Daubert* in Louisiana State Courts

The Louisiana Supreme Court adopted the principles set forth in *Daubert* in *State v. Foret*.<sup>xxiii</sup> In applying these principles, the trial court is vested with vast discretion.<sup>xxiv</sup>

Whether a person meets the qualifications of an expert witness and is competent to testify in a specialized area is within the discretion of the trial court.<sup>xxv</sup> A district court’s decision to qualify an expert will not be overturned absent an abuse of discretion.<sup>xxvi</sup> Louisiana Code of Evidence Article 104 allows the court to conduct a preliminary hearing to determine whether the qualifications and/or opinions of an expert are reliable enough to allow them to be heard by the jury.

*Foret* establishes that Article 702, which is based upon former federal Rule 702, controls the admissibility of expert scientific evidence in Louisiana. For the testimony of an expert to be admissible, the court must first determine whether the expert’s reasoning or methodology embodies “the knowledge and experience of his discipline.” In making this reliability determination, the applicability of the five “*Daubert*” factors may be considered by the court.<sup>xxvii</sup> The *Daubert* factors are flexible and do not represent a definitive checklist. Some or none of the factors may be readily applied in a particular case.<sup>xxviii</sup>

Note that the court must proceed under Article 702 (identical to former federal Rule 702) as opposed to present federal Rule 702. Despite an attempt in the 2001 Regular Session, the Louisiana Legislature has refused to follow the new federal Rule 702 approach.<sup>xxix</sup>

While former federal Rule 702 and current state Article 702 focus on the methodology of the expert, amended federal Rule 702 allows further gatekeeper inquiry into the expert’s conclusions as well by testing whether the expert had sufficient facts (step 1 - “the testimony is based upon sufficient facts or data”) and whether the expert reliably applied the methodology to those facts (step 3 - “the witness has applied the principles and methods reliably to the facts of the case.”) *Daubert*, 509 U.S. at 595, clearly limited the relevant inquiry to methodology only - “the focus, of course, must be solely on principles and methodology, not on the conclusions they generate.” The Louisiana Supreme Court has endorsed this focus on methodology only.<sup>xxx</sup>

Louisiana appellate courts have repeatedly emphasized that the sole focus is the expert's methodology, not the expert's conclusions. Two cases from the Fourth Circuit clearly articulate the narrower Louisiana rule.

Recently, this Court decided<sup>xxxix</sup> that *Daubert* comes into play only when the methodology used by the expert is being questioned. This court found it improper to use *Daubert* analysis when questioning the conclusions reached by applying the methodology to the facts.<sup>xxxix</sup>

The Fifth Circuit agreed in *Keener v. Mid-Continent Casualty*.<sup>xxxix</sup>

We find that the trial court did not err in admitting [the doctor's] testimony. The requirements of *Daubert* and *Foret* were satisfied. The focus of the gatekeeper under C.E. art. 702 "must be solely on principles and methodology, not on the conclusions that they generate." *Daubert*, 509 U.S. 579, 595.

The First Circuit supports this view.

The *Daubert/Foret* guidelines require "only that the proponent of the evidence show that the expert's conclusion has been arrived at in a scientifically sound and methodologically reliable fashion."<sup>xxxix</sup>

Thus, in Louisiana, as long as the expert's methodology is acceptable, cross-examination at trial is the means by which the facts and application are tested whereas federal courts now test facts and application at the gatekeeper hearing before allowing the expert to testify at all. While one can argue whether the new federal approach is helpful or impermissibly invades the province of the trier of fact, it is inarguable that the new federal approach goes beyond Louisiana Article 702. Focusing on methodology only, the experts qualified in Louisiana should only be excluded if they violate fundamental principles of their disciplines' methodologies. Of course, the testimony must "fit" the facts of the case by assisting the trier of fact to understand the fact in issue.<sup>xxxix</sup>

#### **D. Recent Legislative Changes Affecting *Daubert***

Business interests succeeded in changing some aspects of the *Daubert* procedure in the 2008 Legislative Session. These changes are embodied in amendments to the La. Code of Civil Procedure, Article 1425, by amending section "C" and adding section "F." The amended article requires the court, upon motion of any party providing sufficient allegations of need, to hold a contradictory pretrial hearing to determine whether a witness qualifies as an expert or whether the methods employed by the witness are reliable under La. Code of Evid. Art. 702-705. The court must hold the hearing and issue a ruling no later than thirty (30) days before trial. The court may also allow live testimony for good cause shown. La. Code of Evid. Art. 104(A) is the evidentiary standard used at the hearing. The court must provide specific findings of fact, conclusions of law, and reasons for judgment to support its ruling. Reasons must include the elements required by La. Code of Evid. Art. 702-705. All or a portion of the court costs incurred, including expert witness fees and costs, in the discretion of the court, may be assessed

to the non-prevailing party at the conclusion of the hearing on the motion. The parties may consent to different time limits for motion, hearing, and ruling prior to trial. This Act exempts divorce, successions, and actions filed to recover covered losses that resulted from hurricanes Katrina or Rita. The change becomes effective January 1, 2009, except the act becomes effective April 1, 2009, for actions set for trial between January 1, 2009, and April 1, 2009. (Amends La. Code of Civ. Proc. Art 1425(C); adds 425(F)) SB 308 Donahue, Act 787. Effective January 1, 2009.

## **II. Summary Judgment and Expert Testimony**

Defendants frequently couple a Daubert motion with a motion for summary judgment, setting up colliding standards of review. Under both federal and state summary judgment standards, the district court has almost no discretion - if the nonmoving party produces admissible evidence that would sustain a jury verdict in its favor on the matter in dispute, the motion must be denied. And federal and state appellate courts review summary judgments *de novo*. *Daubert* challenges, unlike summary judgment proceedings, are not decided with all of the material disputed facts resolved in favor of the nonmoving party. And the court's evidentiary ruling in a *Daubert* motion is reviewable only for an abuse of discretion.<sup>xxxvi</sup>

*Pipitone v. Biomatrix*<sup>xxxvii</sup> illustrates the Fifth Circuit's analysis in reversing the district court for applying an overly stringent standard of reliability to expert testimony in a summary judgment proceeding.<sup>xxxviii</sup> The appellate decision rejected the rigid checklist approach of the district court in applying all the *Daubert* factors to a medical causation opinion. The Fifth Circuit cited *Kumho* in explaining why an expert may be unable to support his opinion with published peer review - "[i]t might not be surprising in a particular case, for example, that a claim made by a scientific witness has never been the subject of peer review, for the particular application at issue may never previously have interested any scientist."<sup>xxxix</sup>

After analyzing the expert's opinion through *Daubert's* "testing" and "peer review" factors, the court noted that the "error rate" factor "is not particularly relevant, where . . . the expert derives his testimony mainly from firsthand observations and professional experience in translating these observations into medical diagnoses." The court observed "this circuit has upheld the admission of expert testimony where it was based on the expert's specialized knowledge, training, experience, and first-hand observation while supported by solid evidence in the scientific community."<sup>xl</sup> As to the *Daubert* factor of "general acceptance," the court noted "[the expert] based his opinion on how [plaintiff] contracted [the disease] in large part on accepted medical knowledge of the ways in which [the disease] functions as an organism and how it infects humans." The district court abused its discretion in excluding the plaintiff expert's testimony and its grant of summary judgment was reversed.

In *Independent Fire Insurance Company v. Sunbeam Corporation*,<sup>xli</sup> the Louisiana Supreme Court clarified the role of expert testimony in supporting and opposing a motion for summary judgment. In *Sunbeam*, the supreme court resolved a conflict among the circuits by deciding that expert opinion testimony, whether by affidavit or deposition, may be considered in support of or in opposition to a motion for summary judgment. Assuming the testimony would be admissible at trial, it must be considered at the summary judgment stage. The court stated that at the summary judgment stage, the admissibility of an expert opinion affidavit is "subject to challenge . . . by way of a *Daubert* hearing, a motion to strike, or counter affidavits."<sup>xlii</sup>

The Court emphasized four principles in its decision. The first is that the trial judge cannot make credibility determinations on a motion for summary judgment. Second, the court must not attempt to evaluate the persuasiveness of competing scientific studies. In performing its gatekeeping analysis at the summary judgment stage, the court must “focus solely on the principles and methodology, not on the conclusions they generate.”<sup>xliii</sup> Third, the court “must draw those inferences from the undisputed facts which are most favorable to the party opposing the motion.”<sup>xliiv</sup> Fourth, and most importantly, summary judgments deprive the litigants of the opportunity to present their evidence to a jury and should be granted only when the evidence presented at the motion for summary judgment establishes that there is no genuine issue of material fact in dispute. If a party submits expert opinion evidence in opposition to a motion for summary judgment that would be admissible under *Daubert* and the other applicable evidentiary rules, and is sufficient to allow a reasonable juror to conclude that the expert’s opinion on a material fact more likely than not is true, the trial judge should deny the motion and let the issue be decided at trial.

### **III. MEDICAL TESTIMONY**

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#### **A. The Reference Manual on Scientific Evidence**

A helpful source of information for understanding scientific concepts, including medicine, is the *Reference Manual on Scientific Evidence*, now in its second edition.<sup>xliv</sup> The manual is published by the Federal Judicial Center as part of its mission to develop and conduct education programs for judicial branch employees. According to the preface, the manual “furthers the goal of assisting federal judges in recognizing the characteristics and reasoning of ‘science’ as it is relevant in litigation.”

About 100,000 copies of the reference manual have been distributed since its initial publication. Its use is widespread in educational programs for federal and state judges, attorneys, and law students. According to the *Reference Manual’s* preface, the reference guides “are not intended to instruct judges concerning what evidence should be admissible or to establish minimum standards for acceptable scientific testimony.” But some courts ignore that directive and quote the reference guide as an authority for admissibility of scientific evidence. Regardless, counsel handling toxic tort cases should become familiar with, and regularly use, the *Reference Manual*.

#### **B. Expert Qualifications of a Physician**

Both lay testimony and physician testimony can be used to prove a plaintiff’s damages.<sup>xlvi</sup> Expert testimony is required when the conclusion regarding medical causation is not one within common knowledge.<sup>xlvii</sup> This expert testimony is usually provided by a physician. To render an opinion a doctor, of course, must be qualified.

In the United States, a physician is someone who has met the rigorous requirements of a four year program and graduated from a credentialed medical or osteopathic school<sup>xlviii</sup>. The expected next stage of medical training is a formal medical residency program. For example, the

American Board of Internal Medicine (established in 1936) is one of twenty-four primary medical specialty boards recognized by the American Board of Medical Specialties (ABMS), which is the pre-eminent professional organization in the United States responsible for setting standards for certifying all physicians. The credential of ABMS board certification is a marker of substantial proficiency within a particular area of medicine<sup>xlix</sup>.

### **C. Reaching a Diagnosis**

In submitting an opinion, the doctor should review readily available information. Of course, this changes from patient to patient. The patient history is one of the primary and most useful tools in the practice of clinical medicine, and should be obtained directly by the examining physician. A thorough patient history includes not only the present illness and past medical history, but aspects of medical, occupational, personal, and family background relevant to the present problems.<sup>l</sup> If possible, a doctor should personally examine the client and take a thorough history during a clinical visit. A written medical report may contain separate sections on occupational (work) history, present illness (medical history), social history, family history, and past medical history, and a review of systems.

Although there is no established standard patient history questionnaire form, there is agreement that a useful adult patient history should include the following six categories of information 1.) patient identification; 2.) chief complaint and history of present illness; 3.) medical history of injuries, past medical diagnoses, and surgical procedures; 4.) lifestyle characteristics including smoking, drug and alcohol use, and environmental exposures; 5.) family history; and 6.) occupational history.<sup>li</sup> However, gathering a thorough history is improved by use of a formal written questionnaire to ensure that relevant topics are not slighted or missed entirely. A registered nurse may interview the client face-to-face and complete a very detailed personal and medical history questionnaire in advance of the client's examination by the doctor.

Although time consuming and cumbersome, an examination of patient records from treating physicians, clinics, and hospitals can sometimes be crucial for accurate diagnosis.<sup>lii</sup> The doctor may review pages of personal medical records of the client, including those from multiple treating physicians, medical and surgical hospitalizations, laboratory tests, radiology studies, and neuropsychological testing results before arriving at his medical opinion. The client's individual employment and medical surveillance examinations from the employer may be available. The doctor's review of a complete set of personal and occupational patient medical records before he arrives at his medical opinion in the case is desirable, if the case permits.

The physical examination is a routine procedure for evaluating a patient and determining a proper diagnosis. The physical examination has standard components which include determination of vital signs, a description of the patient's general appearance, and examination of specific regions and organ systems of interest.<sup>liii</sup> The doctor's performance of the physical examination should comport with the recommendations of the FJC Reference Guide on Medical Testimony for medical experts. This may include specific findings for the Head and Neck (HEENT), Chest, Heart, Abdomen, Extremities, and Neurological Examination, as well as the other recommended components.

In addition to the specific content of the physical examination, there are accepted

methods of performing the physical examination properly as well. Toxic insult may involve multiple medical findings involving organ systems other than just the nervous system (for example hypertension, hyperlipidemia, hearing loss, fatty liver, pulmonary, etc). A reliable causation determination of the client's medical condition is usually aided by a competent general physical examination. Further, it is the consensus of responsible medical authorities that a patient must be disrobed in order for any physician to perform a thorough physical examination.<sup>liv</sup> The doctor should perform a competent general physical examination using acceptable methods, and a proper recording of his medical findings.

In modern medical practice, appropriate diagnostic tests are helpful to confirming most diagnoses. These may include laboratory tests, pathology tests, and clinical tests. All such tests have strengths and limitations for their use in reaching a diagnosis or making a causal inference. The physician's decision to order a specific test from among those available should take into account expense, risk, accuracy, and predictive value, if known, as well as the patient's individual circumstances, and institutional capabilities.<sup>lv</sup> Based on the doctor's personal history taking and physical examination of the client, his review of previous medical records, and his knowledge of adverse health effects reported in the professional medical literature, he may recommend that certain additional pertinent diagnostic studies be performed by the client's local treating physicians. These additional studies can be representative of those relevant and appropriate studies that can be ordered based on a careful consideration of factors including cost, institutional capabilities, diagnostic sensitivity, and the patient's exposure circumstances, and are not to be an exhaustive and uncritical catalogue of all those which are possibly relevant.

In a case where the medical work-up indicates a potential occupational or environmental disease, special attention must to be paid to documenting the patient's potential chemical exposures. The physician will almost never have direct quantitative exposure levels. However, exposures can be properly inferred by an experienced physician from other types of information, such as workplace layout, work process descriptions, exposure duration, correlates such as acute irritative symptoms, and nearby work activities, among others.<sup>lvi</sup> Each of these alternate information sources should be available and reviewed by the doctor in formulating his opinion. The doctor in a toxic tort case may review a detailed industrial hygiene report from a certified industrial hygienist. The doctor may obtain chemical process or exposure information directly relevant to these issues during his face to face patient interview with the client. From that interview, he can describe in his written report pertinent exposure information such as the plant layout and work processes, work shifts, job activities, personal protective equipment (or lack thereof), specific chemical identification, and recurrent acute irritative symptoms and the circumstances of their appearance.

Other useful records sources for exposure information include industrial hygiene records, private consultant reports, and government reports.<sup>lvii</sup> Examples of each of these types of records if available can be reviewed by the doctor in determining his medical causation opinion. The responsibility and duty to conduct adequate industrial hygiene monitoring rests solely with the employer (assuming it's a work-related exposure) under federal law; the workers bear no burden in this regard whatever. The lack of useful quantitative data is strictly and directly the employer's fault.

In the virtual absence of any useful industrial hygiene quantitative exposure information,

there is still a wealth of useful exposure data in this case from multiple sources, amounting to much relevant confirming information. The doctor can potentially review a large amount of relevant exposure information which allows him to make a careful medical causation determination. This can include, when available, specific workplace chemical identification, detailed work process descriptions, quantitative environmental release data from government reports, expert reports from company private consultants, medical surveillance program summaries, and individual irritative symptom correlates, and expert industrial hygiene reports.

In summary, the medical causation doctor may have credible information from a number of sources in each category of information; direct patient history, detailed questionnaire data, an extensive collection of personal and occupational medical records, multiple detailed sources of external exposure information, a properly conducted physical examination, and appropriate medical diagnostic studies, that a physician may consider in reaching a final medical causation opinion as recommended by the FJC Reference Guide on Medical Testimony under Part III.

#### **D. The Clinical Treating Physician**

It's apparent that a qualified clinical treating physician's credentials, qualifications, and methodology must be evaluated in terms of the physician's acknowledged expertise. There are three relevant chapters in the Reference Manual on Scientific Evidence with respect to different kinds of experts who may hold a medical or medical field-related degree. They are the Reference Guide on Medical Testimony, the Reference Guide on Epidemiology, and the Reference Guide on Toxicology. There is no mention in the current Reference Manual that any one of these three chapters holds sway over another, nor that one specific methodology is superior to another in determining medical causation. There are three separate chapters to recognize three sometimes similar, but distinct, disciplines and methods for doctors with differing qualifications, training, and clinical experience to use in arriving at valid determinations of medical causation.

### **IV. THE METHODOLOGY OF DIFFERENTIAL DIAGNOSIS**

The Federal Judicial Center's Reference Guide on Medical Testimony explains the process of differential diagnosis:<sup>lviii</sup>

In the process of performing a differential diagnosis, the physician determines which of two or more diseases with similar clinical findings is the one that the patient is suffering from. The physician does this by developing a list of all the possible diseases that could produce the observed signs and symptoms, and then comparing the expected clinical findings for each with those exhibited by the patient. (citations omitted)

For the most part, courts are reaching a consensus that the basic methodology used by physicians to diagnose disease is sufficient for courtroom purposes.

For example, recent Louisiana state court cases allow the opinion testimony of treating doctors who follow their routine and established practices in making diagnoses.

*Keener v. Mid-Continent Casualty*<sup>ix</sup> discussed the methodology of a differential diagnosis in a case involving a stroke.

We find that the trial court did not err in admitting Dr. Adams's testimony. The requirements of *Daubert* and *Foret* were satisfied. *Daubert* requires that to qualify as scientific evidence, an opinion must be derived by an accepted scientific method; the four-part test is illustrative, but is not an exclusive guide to determine the reliability of scientific testimony. We find that Dr. Adams's use of differential diagnosis, **which is clearly an accepted methodology in the medical community, was proper.** Dr. Adams moved to rule out every possible explanation of Mr. Keener's stroke before concluding that it was probably related to the surgery. Dr. Adams was honest in his acknowledgment that medical science cannot, at this point in time, clearly explain the cause of Mr. Keener's stroke, but that there was some suggestion, in current medical literature, that the temporal association between the surgery and the stroke was a factor. The fact that his opinion was not admittedly 100% certain goes to its weight, not its admissibility. The focus of the gatekeeper under C.E. art. 702 "must be solely on principles and methodology, not on the conclusions that they generate." *Daubert*, supra at 595, n. 6, 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469. (emphasis supplied)

The Louisiana Fifth Circuit addressed a similar argument in *Younce v. Pacific Gulf Marine, Inc.*,<sup>ix</sup> when the defendant argued that *Daubert* somehow eliminated the equally traditional medical method of relying in part on the patient's history in favor of exclusive reliance on objective tests. The Fifth Circuit quickly dispatched the defense notion.

Dr. LaBorde, PGM's medical expert, testified that of the two factors used to determine causation, the "objective" evidence--records from physical examinations--is more reliable than the "subjective" evidence--the history given by the patient. Dr. LaBorde testified that while "medical causation," causation within the realm of treatment, may be based solely on the patient's history, "objective" evidence takes precedence in a determination of "forensic causation."

We agree with the trial judge's determination on this issue--we cannot agree that a *treating physician's* opinion on causation is so unreliable as to be *inadmissible* at trial. We note first that *Daubert's* concern is the reliability of expert's opinions based on less than "firsthand knowledge or observation." *Daubert*, 509 U.S. at 591, 113 S.Ct. at 2796, 125 L.Ed.2d at 482. It has also been stated that *Daubert* is "concerned with determining the admissibility of *new techniques*." *State v. Foret*, 628 So.2d at 1121 (emphasis supplied). We can't see how either of these concerns implicates an opinion on the causation of injuries given by a patient's treating physician. Dr. Watermeier's testimony, that "all" doctors rely on the patient's own statements in determining causation, was not contradicted by PGM's expert. Further, the risks inherent in relying *exclusively* on records are revealed by Dr. LaBorde's own testimony. Dr. LaBorde's assertions that "objective" records are more reliable are called into question by Dr. LaBorde's admission that his initial opinion, rendered without all of Younce's medical records, might "change" on review of additional information. (emphasis

in original)

In *Dinett v. Lakeside Hospital*,<sup>lxi</sup> the trial court's exclusion of the treating physicians' opinions was reversed. The case involved whether plaintiff contracted hepatitis C from a blood transfusion. The treating doctors properly relied upon what the appellate court called "the standard medical methodology of relying upon patient history." The court pointed out that defendant's motion sought to exclude physician opinions when their **methodology** was sound, thus making *Daubert* inapplicable.

... It is a routine and well established practice for a physician to give opinion testimony as to the cause of a patient's condition based upon the history provided by the patient. In the instant case, however, the trial court excluded the testimony on the sole basis of the testimony of another physician, Dr. Sandler, that because it is scientifically impossible to determine with any certainty that the transfusion was the source of Mrs. Dinett's infection, any opinion to that effect is merely a "guess."

We find the trial court erred in excluding the testimony on this basis. *Daubert* is inapplicable to the instant situation because it is not the experts' methodology that is being questioned; rather, it is the conclusions they reached in applying that methodology to the instant facts. Given that a pre-1990 blood transfusion is a known risk factor for acquiring Hepatitis C and Mrs. Dinett's history of having received such a transfusion (as well as having undergone other surgical procedures which also could have exposed her to Hepatitis C), there is nothing inherently unreliable about a physician testifying as to the probability that the transfusion caused her infection.

The plaintiff's burden in a civil case such as the instant one is to prove that defendant's conduct "more probably than not" caused plaintiff's condition. If the burden were to prove each element of the case beyond a reasonable doubt, as in a criminal matter, the testimony of Dr. Sandler that such proof of causation is scientifically impossible arguably would merit the granting of summary judgment in favor of defendants. In the instant case, however, the exclusion of the plaintiffs' experts at the summary judgment state improperly usurps the function of the jury at trial, which is to weigh the opinions of those experts against that of Dr. Sandler in determining whether the plaintiffs have met their burden of proving causation.

Other state court decisions have been receptive to the notion of separating physicians' methodology from their conclusions. And a recent appellate decision correctly noted that "it appears from the depositions that the requisite scientific level is higher than the indicia of reliability required for expert testimony and opinion at trial."<sup>lxii</sup>

The vast majority of federal appellate courts have held that a medical opinion on causation founded on differential diagnosis satisfies Rule 702 of the Federal Rules of Evidence. For example, the Second Circuit in *McCulloch v. H B. Fuller Co.*<sup>lxiii</sup> accepted as reliable a doctor's opinion that glue fumes caused the plaintiffs respiratory symptoms and throat polyps, **although**

**the doctor could not specify any medical literature stating that glue fumes cause throat polyps.** According to the court, the doctor's opinion was reliable.

Dr. Fagelson based his opinion on a range of factors, including his care and treatment of McCulloch; her medical history (as she related it to him and as derived from a review of her medical and surgical reports); pathological studies; review of Fuller's MSDS; his training and experience; use of a scientific analysis known as differential etiology (which requires listing possible causes, then eliminating all causes but one); and reference to various scientific and medical treatises. **Disputes as to the strength of his credentials, faults in his use of differential etiology as a methodology, or lack of textual authority for his opinion, go to the weight, not the admissibility, of his testimony.**<sup>lxiv</sup> (emphasis added)

In *Zuchowicz v. United States*,<sup>lxv</sup> the Second Circuit reaffirmed a clinical medical expert opinion in pulmonary medicine as sufficiently reliable for a causation opinion. The court approved the causation opinion of a pulmonary medical doctor who testified that overdose of the endometriosis drug Danocrine caused plaintiffs primary pulmonary hypertension. The doctor's conclusion was based on the temporal relationship between the overdose and the start of the disease and the differential etiology method of excluding other possible causes. The Third Circuit has also held that a clinical physician's methodology of differential diagnosis was sufficiently reliable to support the admissibility of that expert's opinion that polychlorinated biphenyls caused specific plaintiffs' illnesses.<sup>lxvi</sup>

The Fourth Circuit affirmed a district court's admission of doctors' testimony that a plaintiffs' severe liver damage was caused by mixing extra-strength Tylenol and alcohol.

Benedi's treating physicians based their conclusions on the microscopic appearance of his liver, the Tylenol found in his blood upon his admission to the hospital, the history of several days of Tylenol use after regular alcohol consumption, the liver enzyme blood level, and the lack of evidence of a viral or any other cause of the liver failure. Benedi's other experts relied upon a similar methodology: history, examination, lab and pathology data, and study of the peer-reviewed literature. We conclude that the district court did not abuse its discretion when it determined that the methodology employed by Benedi's experts is reliable under *Daubert*. **We will not declare such methodologies invalid and unreliable in light of the medical community's daily use of the same methodologies in diagnosing patients.**<sup>lxvii</sup> (emphasis added)

Another Fourth Circuit court stated in *Westbury v. Gislavi Gummi AB*,<sup>lxviii</sup> "differential diagnosis, or differential etiology, is a standard scientific technique of identifying the cause of a medical problem by eliminating the likely causes until the most probable one is isolated."<sup>lxix</sup> A reliable differential diagnosis typically, though not invariably, is performed after physical examinations, the taking of medical histories, and the review of clinical tests, including laboratory tests, and generally is accomplished by determining the possible causes for the patient's symptoms and then eliminating each of these potential causes until reaching one that cannot be ruled out or determining which of those that cannot be excluded is the most likely.<sup>lxx, lxxi</sup>

But the Tenth Circuit has noticed a schism in the way federal courts analyze the methodology of differential diagnosis:

The conflicting views of the reliability of differential diagnosis are apparent in the Parlodel cases too. Compare *Brasher*, 160 F. Supp. 2d at 1296 (concluding that differential diagnosis constitutes a reliable methodology under *Daubert*) and *Globetti*, 111 F. Supp. 2d at 1178 (characterizing differential diagnosis as “a well-recognized and widely-used technique relied on by medical clinicians worldwide to identify and isolate the causes of disease”) with *Glastetter*, 252 F. 3d at 989 (concluding that differential diagnosis and case reports did not establish reliable proof of causation), and *Siharath*, 131 F. Supp. 2d at 1361-63.<sup>lxxii</sup>

## **V. PRESENTATION OF THE EXPERT**

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- i La. Code Evid. art. 701; Fed. Rules Evid. rule 701.
- ii *Cheairs v. State*, 861 So.2d 536, 2003-0680 (La. 12/3/03).
- iii *Armstrong v. Lorino*, 580 So.2d 528 (La. Ct. App. 4<sup>th</sup> Cir. 1991); *Brown v. Morgan*, 449 So.2d 606 (La. Ct. App. 1<sup>st</sup> Cir. 1984); *State v. Mays*, 612 So. 2d 1040 (La. Ct. App. 2d Cir. 1993); *Hattori v. Peairs*, 662 So. 2d 509 (La. Ct. App. 1<sup>st</sup> Cir. 1995).
- iv 293 F.1013, 1014 (D.C. Cir. 1923).
- v Prof. Michael H. Graham, *Scientific and Technological Evidence*, in Handbook Of Federal Evidence 15 (4<sup>th</sup> ed., 1999 Pocket Part); Paul S. Milich, *Controversial Science in the Courtroom: Daubert and the Law's Hubris*, 43 Emory L.J. 913, 915 (1994).
- vi Prof. Michael H. Graham, *The Expert Witness Predicament*, 54 U. Miami L.Rev. 317 (2000).
- vii *Developments In The Law*, 108 Harv.L.Rev. 1423, 1529 n. 160 (1995).
- viii Prof. Michael J. Saks, Merlin and Solomon: *Lessons From The Law's Formative Encounters With Forensic Identification Evidence*, 49 Hastings L.J. 1069, 1076 (1998).
- ix *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 593-595, 113 S.Ct. 2786, 125 L.Ed.2d 469.
- x *Daubert*, 509 U.S. 579, 593-595.
- xi *Daubert*, 509 U.S. 579, 592.
- xii *General Electric Co. v. Joiner*, 522 U.S. 136, 118 S.Ct. 512, 139 L.Ed.2d 508 (1997).
- xiii *General Electric*, 118 S.Ct. 512, 517-519.
- xiv *Kumho Tire Company v. Carmichael*, 526 U.S. 137, 119 S.Ct. 1167, 143 L.Ed.2d 238 (1999).
- xv *Kumho*, 119 S.Ct. 1167, 1175-1176.
- xvi *Kumho*, 119 S. Ct. 1167, 1178.
- xvii *Kumho*, 119 S.Ct. 1167, 1176.
- xviii *Kumho*, 119 S.Ct. 1167, 1176.
- xix *Weisgram v. Marley Co.*, 528 U.S. 440, 120 S.Ct. 1011, 145 L.Ed.2d 958 (2000).
- xx Advisory Committee Notes, Fed. R. Evid., Rule 702, as amended.
- xxi Advisory Committee Notes, Fed. R. Evid., Rule 702, as amended.
- xxii *United States v. 14.38 Acres of Land Situated in Leflore County, Mississippi*, 80 F.3d 1074, 1078 (5<sup>th</sup> Cir. 1996).
- xxiii 628 So.2d 1116 (La. 1993).
- xxiv *Mistich v. Volkswagen of Germany, Inc.*, 666 So.2d 1073, 95 0939 (La. 1/29/96), and *Cheairs v. State*, 861 So.2d 536, 2003-0680 (La. 12/3/03).
- xxv *Merlin v. Fuselier*, 789 So.2d 710, 718, 00-1862 (La.App. 5 Cir. 5/30/01), and *Cheairs v. State*, 861 So.2d 536, 2003-0680 (La. 12/3/03).
- xxvi *Merlin v. Fuselier*, 789 So.2d 710, 718, 00-1862 (La.App. 5 Cir. 5/30/01), and *Cheairs v. State*, 861 So.2d 536, 2003-0680 (La. 12/3/03).
- xxvii The five *Daubert* factors are listed in the section, "The Evolution of *Daubert* in Federal Court."
- xxviii *Kumho*, 119 S. Ct. 1167, 1171, and *Independent Fire Insurance Company v. Sunbeam Corporation*, 755 So.2d 226, 234, 1999-2181 (La. 2/29/00).
- xxix Sen. Dardenne (R- EBR Parish) filed Senate Bill 446, it was referred to the Judiciary A Committee, but it never passed even that initial stage.
- xxx *Independent Fire Insurance Company v. Sunbeam Corporation*, 755 So.2d 226, 236, 1999-2181 (La. 2/29/00); and *Blank v. Sid Richardson Carbon & Gasoline Co.*, 762 So.2d. 1115, 2000-1025 (La. 6/2/00).
- xxxi *Dinett v. Lakeside Hospital*, 811 So.2d 116, 2000-2682 (La.App. 4 Cir. 2/20/02).
- xxxii *Doe v. Archdiocese of New Orleans*, 823 So.2d 360, 2001-0739 (La.App. 4 Cir. 5/8/02).
- xxxiii 817 So.2d 347, 355, 01-CA-1357 (La. 5 Cir. 4/20/02); *writ denied*, 825 So.2d 1175, 2002-

1498 (La. 9/20/02).

xxxiv *Wingfield v. La. DOTD*, 835 So.2d 785 (La.App. 1<sup>st</sup> Cir. 11/08/02), *writ denied*, 845 So.2d. 1059 (5/30/03), *cert. denied*, 124 S.Ct. 419 (10/14/03).

xxxv *Cheairs v. State*, 861 So.2d 536, 2003-0680 (La. 12/3/03).

xxxvi *General Electric Co. v. Joiner*, 522 U.S. 136, 118 S.Ct. 512, 139 L.Ed.2d 508 (1997); and *MSF Corporation v. Exxon Corporation, et al.*, 934 So.2d 708, 2004-0988 (La.App. 1 Cir. 12/22/05).

xxxvii *Pipitone*, 288 F.3d 239 (5<sup>th</sup> Cir. 2002).

xxxviii *Pipitone*, 288 F.3d 239 (5<sup>th</sup> Cir. 2002).

xxxix *Kumho*, 119 S.Ct. 1167, 1175.

xl Citing *Skidmore v. Precision Printing and Packaging, Inc.*, 188 F.3d 618 (5<sup>th</sup> Cir. 1999) (holding that the district court properly admitted testimony of a psychiatrist who diagnosed plaintiff because the psychiatrist “testified to his experience, to the criteria by which he diagnosed [the plaintiff], and to the standard methods of diagnosis in his field”); *St. Martin v. Mobil Exploration & Producing U.S., Inc.*, 224 F.3d 402, 406-07 (5<sup>th</sup> Cir. 2000) (holding that ecologist’s first-hand observation of flooded marsh at issue combined with his expertise in marshland ecology were sufficiently reliable bases of his opinion on causation under *Daubert* to admit the testimony.)

xli 755 So. 2d 226, 236, 99-2257 (La. 2/29/00).

xlii *MSF Corporation v. Exxon Corporation, et al.*, 934 So.2d 708, 2004-0988 (La.App. 1 Cir. 12/22/05) discusses at length the use of affidavits in a Motion for Summary Judgment.

xliii Citing *Daubert*, 509 U.S. 579, 595.

xliv Citing Frank L. Maraist and Harry T. Lemmon, 1 Louisiana Civil Law Treatise, Civil Procedure, § 6.8, p. 145 (1999).

xlv

An electronic version of the reference manual can be found at

<http://www.fjc.gov/public/home.nsf/pages/16-7k>.

xlvi *Lasha v. Olin Corp.*, 625 So.2d 1002 (La. 1993).

xlvii *Hutchinson v. Shah*, 94-0264, (La.App. 1Cir. 12/22/94), 648 So.2d 451, *writ denied*, 95-0541, 653 So.2d 570, (La. 4/21/95) and *Schexnayder v. Exxon Pipeline*, 815 So.2d 156, 01-1236 (La.App. 5 Cir. 3/13/02).

xlviii Federal Judicial Center (FJC) Reference Guide on Medical Testimony, Part II A, p. 447.

xlix FJC Reference Guide on Medical Testimony, Part II A, p. 448.

l FJC Reference Guide on Medical Testimony, Part III A, p. 452-453.

li FJC Reference Guide on Medical Testimony, Part III A, p. 453.

lii FJC Reference Guide on Medical Testimony, Part III B, p. 455.

liii FJC Reference Guide on Medical Testimony, Part III C, p. 455-456.

liv See standard medical textbooks by DeJong, Harrison, or Bates.

lv FJC Reference Guide on Medical Testimony, Part III D, p. 457-461.

lvi FJC Reference Guide on Medical Testimony, Part III A2, p. 454-455.

lvii FJC Reference Guide on Medical Testimony, Part III A2, p. 455.

lviii FJC Reference Guide on Medical Testimony, Part IV, p. 463.

lix No. 01-CA-1357 (La. 5 Cir. 4/20/02), 817 So.2d 347, 355, *writ den.* 2002-1498 (La. 9/20/02) 2002 WL 31175447.

lx 01-0546 (La. App. 5 Cir. 4/10/02), 817 So.2d 255, *rev’d on other grounds*, 827 So.2d 1144, 2002-4343 (La. 10/4/02).

lxi 811 So.2d 116, 2000-2682 (La.App. 4 Cir. 2/20/02).

lxii *Wingfield v. State of Louisiana*, 2001-2668 (La.App. 1 Cir. 11/8/02), 835 So.2d 785, *writ denied*, 2003-0313 (La. 5/30/03), 845 So.2d 1059, 1060.

lxiii 61 F.3d 1038 (2<sup>nd</sup> Cir. 1995).

lxiv 61 F.3d 1044 (2<sup>nd</sup> Cir. 1995).

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140 F.3d 381 (2<sup>nd</sup> Cir. 1998).

lxvi *In Re Paoli R.R. Yard PCB Litigation*, 35 F.3d 717 (3<sup>rd</sup> Cir. 1994).

lxvii *Benedi v. McNeil-P.P.C., Inc.*, 94-2596, 66 F.3d 1378, (4<sup>th</sup> Cir. 1995).

lxviii 178 F.3d 257, 51 Fed. R. Evid. Serv. 682 (4<sup>th</sup> Cir. 1999).

lxix *Id.*, 178 F.3d at 262. See also *Baker v. Dalkon Shield Claimants Trust*, 156 F.3d 248, 252-253, 50 Fed. R. Evid. Serv. 115 (1<sup>st</sup> Cir. 1998).

lxx *Kannankeril v. Terminix Intern., Inc.*, 128 F.3d 802, 807, 47 Fed. R. Evid. Serv. 1376 (3d Cir. 1997), *as amended*, (Dec. 12, 1997) (explaining that “differential diagnosis is defined for physicians as ‘the determination of which of two or more diseases with similar symptoms is the one from which the patient is suffering, by a systematic comparison and contrasting the clinical findings’ “ (quoting Stedman’s Medical Dictionary 428 (25<sup>th</sup> ed. 1990)). See also *McCulloch v. H. B. Fuller Co.*, 61 F.3d 1038, 1044, 42 Fed. R. Evid. Serv. 1047 (2d Cir. 1995) (describing differential etiology as an analysis “ which requires listing possible causes, then eliminating all causes but one”); *Glaser v. Thompson Medical Co., Inc.*, 32 F.3d 969, 978, 40 Fed. R. Evid. Serv. 47, 1994 FED App. 0287P (6<sup>th</sup> Cir. 1994), *reh’g and reh’g en banc denied*, (Nov. 9, 1994) (recognizing that differential diagnosis is “a standard diagnostic tool used by medical professionals to diagnose the most likely cause or causes of illness, injury and disease”.)

lxxi For a more extensive discussion see Branch, Turner W. and Branch, Margaret Moses, *Environmental Tort Litigation*, ATLA’s Litigating Tort Cases, §67:35, pp. 88-91 (Roxanne Barton Conlin and Gregory S. Cusimano, eds.) (West & ATLA 2003).

lxxii *Hollander v. Sandoz Pharmaceuticals*, 289 F.3d 1193 (10<sup>th</sup> Cir. 2002).