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# *Daubert* Law in Florida

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## 1. Florida's *Daubert* Statute - § 90.702

### A. THE TEXT OF THE STATUTE

1. Effective July 1, 2013
2. **"90.702 Testimony by experts.** — If scientific, technical, or other specialized knowledge will assist the trier of fact in understanding the evidence or in determining a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education may testify about it 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."
3. The Preamble to the Bill (Ch. 2013-107, H.B. 7015) expressly states that by amending Fla. Stat. § 90.702, the Florida Legislature intends to:

   i. "adopt the standards for expert testimony in the courts of this state as provided in Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993), General Electric Co. v. Joiner, 522 U.S. 136 (1997), and Kumho Tire Co. v. Carmichael, 526 U.S. 137 (1999);" and

   ii. "prohibit in the courts of this state pure opinion testimony as provided in Marsh v. Valyou, 977 So.2d 543 (Fla. 2007)."

### B. FLORIDA CASE LAW INTERPRETING *DAUBERT*

1. The most important practical difference between Daubert and Frye is that Daubert applies to ***all*** expert testimony.
2. "Thus, the Daubert test applies not only to 'new or novel' scientific evidence, but to all other expert opinion testimony. Expert testimony that might otherwise qualify as "pure opinion" testimony is expressly prohibited. The legislative purpose of the new law is clear: to tighten the rules for admissibility of expert testimony in the courts of this state." Perez v. Bell South Telecom. Inc., 138 So.3d 492, 497 (Fla. 3d DCA April 23, 2014) (affirming exclusion of expert who testified that workplace stress caused a placental abruption).
3. The legislative change to Daubert does not apply retroactively. Zakrzewski v State, 147 So.3d 531 (Fla., June 20, 2014) (refusing to apply the Daubert standard to the admissibility of testimony from a 1996 hearing).
4. The First DCA reversed a JCC's decision to apportion damages between a workplace injury and a prior injury because the testimony supporting apportionment was unreliable. Giaimo v. Florida Autosport, Inc., 2014 WL 6679290, 39 Fla. L. Weekly D2484 (Fla. 1st DCA, November 26, 2014) (holding that the testimony of a treating neurosurgeon, which was based on experience, treatment of the claimant, and a thorough review of the medical records, was pure opinion testimony).
5. Even though Giaimo was a win for the plaintiff, it is a dangerous holding for plaintiffs generally because it sets a very high standard (seemingly an erroneous standard under Kumho) for what counts as "pure opinion" testimony. This case can be distinguished because the testimony in the record supporting the opinion of the neurosurgeon was very weak. Further, the First DCA reviewed the case under a *de novo* standard to determine whether there was medically acceptable evidence to apportion damages under Fla. Stat. § 440.15(5)(b), but was silent as to whether it was reviewing the Daubert determination under an abuse of discretion standard – which is the correct standard per Joiner. This case may be overturned on several grounds.
6. There have been numerous Daubert determinations made at the trial court level. Recently, in Espinal v. Bell, 2013-CA-1500 (Fla. 9th Cir. Ct., January 29, 2015), Judge Polodna struck the testimony of notorious defense expert, Michael Zeide, M.D., because his testimony as to the reasonableness of medical bills was based upon his own moral and ethical beliefs rather than what were reasonable and customary fees in the community.

## 2. The *Daubert* Trilogy

### A. *DAUBERT V. MERRELL DOW PHARMACUETICALS, INC.*, 509 U.S. 579 (1993) – RELIABILITY AND RELEVANCY

1. Plaintiffs alleged that Bendectin, an anti-nausea drug for pregnant women, caused their birth defects (limb deformities). Plaintiffs' experts were excluded under Frye because their testimony was not based upon statistically significant epidemiological evidence, which was deemed to be the only "generally accepted" method for establishing causation when the biological mechanism is unknown. The Ninth Circuit Affirmed.
2. The Supreme Court reversed (a win for the Plaintiffs) and held that Frye "should not be applied in federal trials" because "a rigid 'general acceptance' requirement would be at odds with the 'liberal thrust' of the Federal Rules and their 'general approach of relaxing the traditional barriers to opinion testimony.'" Daubert, 509 U.S. at 588.
3. Rather than adopting a bright-line rule of requiring expert testimony to be based upon "generally accepted" methods for establishing causation (i.e., statistically significant epidemiological evidence), the Court announced a more flexible approach and assigned to trial courts the role of "gatekeeper" with "the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand." Id. at 597.

4. "The focus, of course, must be solely on principles and methodology, not on the conclusions that they generate." Id. at 595.
5. It is important to note that Daubert was a case about scientific knowledge as opposed to the other types of knowledge expressly listed in F.R.E. 702 ("technical, or other specialized knowledge"). "Our discussion is limited to the scientific context because that is the nature of the expertise offered here." Id. at 590, n.8.

## B. RELIABILITY MEANS "EVIDENTIARY RELIABILITY" – I.E., "TRUSTWORTHINESS"

1. "[I]n order to qualify as 'scientific knowledge,' an inference or assertion must be derived by the scientific method. Proposed testimony must be supported by appropriate validation – i.e., 'good grounds,' based on what is known. In short, the requirement that an expert's testimony pertain to 'scientific knowledge' establishes a standard of evidentiary reliability." Daubert, 509 U.S. at 590.
2. "[O]ur reference here is to *evidentiary* reliability – that is, trustworthiness. . . . In a case involving scientific evidence, *evidentiary reliability* will be based upon *scientific validity*." Id. at 590, n.9 (emphasis in original).

## C. RELEVANCY MEANS THE TESTIMONY IS SUFFICIENTLY TIED TO THE FACTS OF THE CASE

1. "*Rule* 702 further requires that the evidence or testimony 'assist the trier of fact to understand the evidence or to determine a fact in issue.' This condition goes primarily to relevance. Expert testimony which does not relate to any issue in the case is not relevant and, ergo, non-helpful." Daubert, 509 U.S. at 591.
2. "The consideration has been aptly described by Judge Becker as one of 'fit.' 'Fit' is not always obvious, and scientific validity for one purpose is not necessarily scientific validity for other, unrelated purposes." Id.
3. "The study of the phases of the moon, for example, may provide valid scientific 'knowledge' about whether a certain night was dark, and if darkness is a fact in issue, the knowledge will assist the trier of fact. However (absent creditable grounds supporting such a link), evidence that the moon was full on a certain night will not assist the trier of fact in determining whether an individual was unusually likely to have behaved irrationally on that night." Id.

## D. *DAUBERT'S* "GENERAL OBSERVATIONS" OF FACTORS BEARING ON THE INQUIRY

1. "Many factors will bear on the inquiry, and we do not presume to set out a definitive checklist or test. But some general observations are appropriate." Daubert, 509 U.S. at 593.
    a. "a key question to be answered in determining whether a theory or technique is scientific knowledge that will assist the trier of fact will be whether it can be (and has been) tested." Id.
    b. "whether the theory or technique has been subjected to peer review and publication." Id.
    c. "in the case of a particular scientific technique, the court ordinarily should consider the known or potential rate of error." Id. at 594.
    d. "'general acceptance' can yet have a bearing on the inquiry." Id.

## E. VIGOROUS CROSS EXAMINATION

1. "Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence." Daubert, 509 U.S. at 596.
2. "Additionally, in the event the trial court concludes that the scintilla of evidence presented supporting a position is insufficient to allow a reasonable juror to conclude that the position more likely than not is true, the court remains free to direct a judgment . . . and likewise to grant summary judgment." Id.
3. "These conventional devices, rather than wholesale exclusion under an uncompromising 'general acceptance' test, are the appropriate safeguards where the basis of scientific testimony meets the standards of *Rule 702*." Id.

## F. *GENERAL ELECTRIC CO. V. JOINER*, 522 U.S. 136 (1997) — ANALYTICAL GAPS AND ABUSE OF DISCRETION

1. The Court affirmed a district court's exclusion of an expert who testified that exposure to a chemical, PCB, "promoted" plaintiff's lung cancer. The expert's opinions were based upon mice studies and four readily distinguishable epidemiological studies, and plaintiff was a smoker and had a family history of lung cancer.
2. Although the Daubert Court said the focus "must be solely on the principles and methodology and not the conclusions they generate," in Joiner Justice Rehnquist stated: "conclusions and methodology are not entirely distinct from one another. Trained experts commonly extrapolate from existing data. But nothing in either Daubert or the Federal Rules of Evidence requires a district court to admit opinion evidence which is connected to existing data only by the *ipse dixit* of the expert. A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered." Joiner, 522 U.S. at 146.
3. The Joiner Court made clear that the "admissibility of expert testimony . . . is reviewable under the abuse of discretion standard." Id. at 143.
4. Important to note when arguing a Daubert motion (and at Daubert hearings) is that the trial court has an extremely wide range of discretion to work within and the trial court can decide to exclude or admit a particular expert's testimony, and – so long as the court does not "abuse" its discretion – either decision will be upheld.

## G. *KUMHO TIRE CO. V. CARMICHAEL*, 526 U.S. 137 (1999) — EXPANDING ON THE FACTORS SET FORTH IN DAUBERT

1. The Court held the Daubert gatekeeping obligation "applies to all expert testimony." Id. at 147.
2. "Daubert makes clear that the factors it mentions do *not* constitute a 'definitive checklist or test.'" Id. at 150 (emphasis in original).
3. In Kumho, the Court affirmed the district court's exclusion of an expert who testified that a tire blow-out (which resulted in a car wreck) was caused by a defect in the tire rather than due to abuse or the tire being underinflated.
4. The exclusion was based on the fact that the expert repeatedly relied "on the 'subjectiveness' of his mode of analysis in response to questions seeking specific information" about his method for determining the defect, and because he determined the tire to be defective (and issued a report to that effect) after simply looking at photographs and only inspected the tire itself the morning of his deposition. Kumho, 526 U.S. at 155. Again, trustworthiness is what Daubert is all about.
5. The trial court must "make certain that [the] expert, whether basing testimony upon professional studies or personal experience, employs in the court-

room the same level of ***intellectual rigor that characterizes the practice of an expert in the relevant field.***" Id. at 152 (emphasis added).

6. "[T]he factors identified in Daubert may or may not be pertinent in assessing reliability, depending on the nature of the issue, the expert's particular expertise, and the subject of his testimony. The conclusion, in our view, is that we can neither rule out, nor rule in, for all cases and for all time the applicability of the factors mentioned in Daubert, nor can we now do so for subsets of cases categorized by category of expert or by kind of evidence. Too much depends upon the particular circumstances of the particular case at issue." Id. at 155.
7. The Court went on to state, "no one denies that an expert might draw a conclusion from a set of observations based on extensive and specialized experience. Id. at 156. But, "it will at times be useful to ask even of a witness whose expertise is based purely on experience, say, a perfume tester able to distinguish among 140 odors at a sniff, whether his preparation is of a kind that others in the field would recognize as acceptable." Id. at 151.
8. "The trial court must have the same kind of latitude in deciding *how* to test an expert's reliability, and to decide whether or when special briefing or other proceedings are needed to investigate reliability, as it enjoys when it decides whether that expert's relevant testimony is reliable." Id. at 152 (emphasis in original).
9. "Thus, whether Daubert's specific factors are, or are not, reasonable measures of reliability in a particular case is a matter that the law grants the trial judge broad latitude to determine." Id. at 153.

### H. TAKEAWAYS FROM THE *DAUBERT* TRILOGY

1. Expert testimony must be relevant and reliable.
2. Kumho makes clear that the factors listed in Daubert are not controlling and the trial courts have a significant amount of discretion and flexibility in determining whether the expert's testimony is reliable (i.e., trustworthy).
3. The purpose of a Daubert analysis is, "to analyze not what the experts say, but what basis they have for saying it." Daubert v. Merrell Dow Pharmaceuticals. Inc., 43 F.3 1311, 1318 (9th Cir. 1995) ("Daubert II" on remand).
4. Thus, the trustworthiness of an expert's opinion is what Daubert is all about. The expert forms an opinion, and the trial court (as gatekeeper) gets to say, in essence – yea, but how do you know that? – what basis do you have for saying that? – please explain your reasoning. In other words, under Daubert, experts must show their work.

## 3. Eleventh Circuit *Daubert* Jurisprudence

### A. "DISTILLED" TO THREE REQUIREMENTS

"We have distilled from Daubert, Kumho, and Rule 702 these three requirements: First, 'the expert must be qualified to testify competently regarding the matter he or she intends to address'; second, the expert's 'methodology ... must be reliable as determined by a Daubert inquiry'; and third, the expert's 'testimony must assist the trier of fact through the application of expertise to understand the evidence or determine a fact in issue.'" Adams v. Lab. Corp. of America, 760 F.3d 1322, 1328 (11th Cir., July 29, 2014) (quoting Kilpatrick v. Breg, Inc., 613 F.3d 1329, 1335 (11th Cir. 2010)).

### B. BURDEN OF PROOF IS ON THE PROPONENT OF THE EVIDENCE

"[T]he proponent of the testimony does not have the burden of proving that it is scientifically correct, but that by a preponderance of the evidence, it is reliable." Allison v. McGhan Med. Corp., 184 F.3d 1300, 1312 (11th Cir. 1999) (citing In re Paoli R.R. Yard PCB Litig., 35 F.3d 717, 744 (3rd Cir. 1994)).

### C. *DAUBERT* DOES NOT SUPPLANT THE ADVERSARY SYSTEM

"We have repeatedly stressed Daubert's teaching that the gatekeeping function under Rule 702 'is not intended to supplant the adversary system or the role of the jury: vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking ***shaky but admissible evidence***.'" Adams, 760 F.3d at 1334 (emphasis in original) (quoting United States v. Alabama Power Co., 730 F.3d 1278, 1282 (11th Cir. 2013).

### D. VERY HIGH ABUSE OF DISCRETION STANDARD

1. "This standard of review requires that we defer to the district court's ruling unless it is 'manifestly erroneous.'" Rink v. Cheminova, Inc., 400 F.3d 1286, 1291 (11th Cir. 2005) (affirming exclusion of chemical engineer who had never dealt with the specific chemical at issue in the case in his professional life and who made "leaps of faith" in his calculations).
2. "[I]n the last five years, there have been 54 reported decisions of this court (13 published opinions and 41 unpublished opinions) reviewing district court evidentiary rulings under Daubert, and the district court was reversed in only three of those cases." U.S. v. Alabama Power Co., 730 F.3d 1278, 1289 (11th Cir. 2013) (J. Hodge dissenting).
3. "We are to review the district court's decision on how to determine reliability with the same abuse of discretion standard that we use to review its ultimate conclusion. . . . [G]iven the heavy thumb—really a thumb and a finger or two—that is put on the district court's side of the scale, we conclude that it was not an abuse of discretion to admit the expert opinions . . . ." U.S. v. Brown, 415 F.3d 1257, 1268 (11th Cir. 2005) (affirming admissibility of chemist and biochemist who conducted visual comparisons of molecular models of chemicals and based opinions on knowledge and experience).

### E. *DAUBERT* HEARINGS

"Daubert hearings are not required, but may be helpful in 'complicated cases involving multiple expert witnesses. A district court should conduct a Daubert inquiry when the opposing party's motion for a hearing is supported by conflicting medical literature and expert testimony." U.S. v. Hansen, 262 F.3d 1217 (11th Cir. 2001) (citations omitted).

## 4. Qualifications

### A. PRINCIPLES OF LAW

1. The proponent must show "the expert is qualified to testify competently regarding the matters he intends to address." Allison v. McGhan Med. Corp., 184 F.3d 1300, 1309 (11th Cir. 1999).
2. "Although an expert's qualifications go primarily to the first prong of Daubert's inquiry, 'an expert's overwhelming qualifications may bear on the reliability of his proffered testimony' even if 'they are by no means a guarantor of reliability.'" Tampa Bay Water v. HDR Engineering, Inc., 731 F.3d 1171, 1185 (11th Cir. 2013) (quoting Quiet Technology DC-8, Inc. v. Hurl-

Dubois UK Ltd., 326 F.3d 1333, 1341 (11th Cir. 2003)).

3. "If the expert meets liberal minimum qualifications, then the level of the expert's expertise goes to credibility and weight, not admissibility." Kannankeril v. Terminix Intern., Inc., 128 F.3d 802, 808 (3d Cir. 1997) (citing In re Paoli R.R. Yard PCB Litigation, 35 F.3d 717, 741 (3d Cir. 1994)).
4. "[The expert's] background and practical experience qualify as 'specialized knowledge' gained through 'experience, training, or education.'" McCullock v. H.B. Fuller, Co., 61 F.3d 1038 (2nd Cir. 1995) (affirming admissibility of expert consultant on fume dispersal).
5. "Qualification refers to the requirement that the witness possess specialized expertise. We have interpreted this requirement liberally, holding that 'a broad range of knowledge, skills, and training qualify an expert.'" Schneider v. Fried, 320 F.3d 396, 404 (3rd Cir. 2003) (reversing exclusion of cardiologist's standard of care opinion because expert had sufficient experience to testify to such matters) (citations omitted).
6. "[I]t is an abuse of discretion to exclude testimony simply because the trial court does not deem the proposed expert to be the best qualified or because the proposed expert does not have the specialization that the court considers most appropriate." Holbrook v. Lykes Bros. S.S. Co., Inc., 80 F.3d 777, 782 (3rd Cir. 1996).
7. "If the witness is relying solely or primarily on experience, then the witness must explain *how* that experience leads to the conclusion reached, why that experience is a sufficient basis for the opinion, and how that experience is reliably applied to the facts. The trial court's gatekeeping function requires more than simply 'taking the expert's word for it.'" U.S. v. Frazier, 387 F.3d 1244, 1261 (11th Cir. 2004) (quoting Advisory Committee Notes on Fed. R. Evid. 702, 2000 Amendments).

### B. AREAS OF QUESTIONING TO TEST QUALIFICATIONS

1. What is the expert's background/training/education?
2. For each opinion and sub-opinion, find out how the expert gained the knowledge to provide those opinions—how does the expert know what the expert claims to know?
   i. Learned in school/college/post-graduate work?
   ii. Learned from "on the job" training?
   iii. Based on experience or academic knowledge?
   iv. Conducted own research independent of litigation?
   v. Relied on other sources and authorities for information related to this case?
3. How does the expert's professional work/experience relate to the opinions being offered? Does expert regularly perform this kind of work in professional life?
4. What are the differences between the expert's wok/experience and the work performed in this case?
5. What percentage of the expert's work relates to the specific issues in the case?
6. How recently has expert engaged in professional work on issues specific to the case?
7. Has the expert been published? On anything related to the case? Was the expert the primary contributor to the work or was name simply attributed to the work?
8. Do opinions exceed scope of expertise? Are opinions based on, even in part, knowledge or principles derived from fields of study not within the scope of expertise?
9. Opinions based on any bedrock assumptions that come from other disciplines?
10. Will expert admit he is not an expert in those areas. No training in those areas? No experience in those areas?
11. If issue came up in professional life, would expert defer to expert in another field? Would expert defer to another expert regarding any issues in this case?
12. Would expert feel comfortable lecturing on topic about which she is opining? Has expert lectured/taught on subject matter contained within opinions? When? Where? To whom?
13. Membership in associations? Current? Paid dues? Does CV list anything misleading or outdated items?
14. Awards, recognitions, achievements in the field?
15. Subject to disciplinary actions within the field?
16. Involvement in litigation in the past? Percentage of time spent involved in litigation? Plaintiff v. Defense?
17. What qualifies you as an expert in this case?
18. Does knowledge in this field change rapidly? What does expert do to keep abreast of changes?
19. How does your experience lead the conclusions reached? How is your experience a sufficient basis for those conclusions? Is there any other information or experiences that you did not have, but which would have helped you in forming your opinion?
20. How did you apply your experience reliably to the facts in this case?

## 5. Reliability

### A. FACTORS INDICATING RELIABILITY

1. **Can Be (Has Been ) Tested.** *(Daubert)*
2. **Subjected to Peer Review.** *(Daubert)*
3. **Known or Potential Error Rate.** *(Daubert)*
4. **General Acceptance.** *(Daubert)*
5. **Analytical Gaps.** "Whether the expert has unjustifiably extrapolated from an accepted premise to an unfounded conclusion." Advisory Committee Notes on Fed. R. Evid. 702, 2000 Amendments (citing Joiner, 522 U.S. at 146).
6. **Research Independent of Litigation.** Whether experts are "proposing to testify about matters growing naturally and directly out of research they have conducted independent of the litigation, or whether they have developed their opinions expressly for purposes of testifying." Daubert v. Merrell Dow Pharma. Inc., 43 F.3d 1311, 1317 (9th Cir. 1995) ("Daubert II").
7. **Intellectual Rigor.** Kumho, 526 U.S. at 152; see also, Sheehan v. Daily Racing Form, Inc., 104 F.3d 940, 942 (7th Cir. 1997) (J. Posner) ("[Daubert] requires the district judge satisfy himself that the expert is being as careful as he would in is regular professional work outside his paid litigation consulting.").
8. **Consideration of Alternative Explanations.** See Claar v. Burlington N.R.R., 29 F.3d 499 (9th Cir. 1994) (testimony excluded where the expert failed to consider other obvious causes for the plaintiff's condition). Compare Ambrosini v. Labarraque, 101 F.3d 129 (D.C. Cir. 1996) (the possibility of some uneliminated causes presents a question of weight, so long

as the most obvious causes have been considered and reasonably ruled out by the expert).

9. **Practical Experience.** "Nothing in this amendment is intended to suggest that experience alone—or experience in conjunction with other knowledge, skill, training or education—may not provide a sufficient foundation for expert testimony. To the contrary, the text of Rule 702 expressly contemplates that an expert may be qualified on the basis of experience. In certain fields, experience is the predominant, if not sole, basis for a great deal of reliable expert testimony." Advisory Committee Notes on Fed. R. Evid. 702, 2000 Amendments (citing United States v. Jones, 107 F.3d 1147 (6th Cir. 1997) (no abuse of discretion in admitting the testimony of a handwriting examiner who had years of practical experience and extensive training, and who explained his methodology in detail)).

## B. EVIDENTIARY RELIABILITY/ GOOD GROUNDS /TRUSTWORTHINESS

1. **Reviewer Bias.** "Hindsight bias is a common-sense concept—everyone knows that 'hindsight is 20/20.' And common-sense concepts are especially appropriate for consideration by a jury." Adams v. Lab. Corp. of America, 760 F.3d 1322, 1335 (11th Cir. July 29, 2014) (reversing exclusion of cytotechnologists who reviewed slides using a widely accepted methodology; the court did not take kindly to the industry guidelines which intended to affect admissibility in litigation).
2. **Inadequacies in a Study.** "Indeed, 'in most cases, objections to the inadequacies of a study are more appropriately considered an objection going to the weight of the evidence rather than its admissibility.'" Rosenfeld v. Oceania Cruises, Inc., 654 F.3d 1190, 1193 (11th Cir. 2011) (quoting Hemmings v. Tidyman's Inc., 285 F.3d 1174, 1188 (9th Cir.2002)).
3. **Flaws in Analysis.** "[T]he alleged flaws in [the expert's] analysis are of a character that impugn the accuracy of his results, not the general scientific validity of his methods." Quiet Technology DC-8, Inc. v. Hurl-Dubois UK Ltd., 326 F.3d 1333, 1345 (11th Cir. 2003). "Quiet says that 'Frank's failure to include all available flight test parameters in his model is fatal to any meaningful correlation of flight test results with computer results....' Yet the Supreme Court has explicitly rejected the same argument in a different substantive context, holding that '[n]ormally, failure to include variables will affect the analysis' probativeness, not its admissibility.'" Id. at 1346 (quoting Bazemore v. Friday, 478 U.S. 385, 400 (1986)).
4. **Lack of published studies.** "[R]eference to a published study . . . is not necessary to demonstrate minimum scientific reliability" where scientific literature "may not be extensive." United Fire & Cas. Co. v. Whirlpool Corp., 704 F.3d 1338, 1342 (11th Cir. 2013) (citing Daubert, 509 U.S. at 593).
5. **Lacking Daubert Factors.** "The question, then, is whether expert opinion evidence that does not meet three of the four Daubert factors nevertheless can be admitted. In the right circumstances, the answer to that question is 'yes.'" U.S. v. Brown, 415 F.3d 1257, 1267 (11th Cir. 2005).
6. **Mere General Acceptance Can be Sufficient.** "We cannot say that the court abused its discretion in also concluding that the specific Daubert factors (such as testability and peer review) were not required in this particular situation. Nor can we say that its key credibility determination was clearly erroneous." U.S. v. Brown, 415 F.3d 1257, 1267-68 (11th Cir. 2005) (trial court accepted as true the expert's testimony that the methods used were generally accepted).
7. **Use in Industry Alone is Insufficient.** "[T]hat a laboratory has used a procedure for a number of years, without more, is not evidence of reliability. An unreliable test does not become reliable just because the test is used for a lengthy period of time. The confidence of the Commonwealth of Kentucky in its laboratory does not prove that the methods used by the lab are scientifically sound." Nelson v. Freightliner, LLC, 154 Fed. Appx. 98, 110 (11th Cir. 2005).
8. **Agency Acceptance is Not the Same as Peer Review.** "[A]pproval and use by the agencies of the Commonwealth of Kentucky [is not] a form of peer review as suggested at the Daubert hearing. Peer review involves submission to the scrutiny of the scientific community. Peer review is not acceptance by a collection of agencies that are not qualified to comment on the reliability of a methodology." Id.
9. **Flaws in Facts Underlying Analysis.** "[T]he court's gatekeeping function focuses on an examination of the expert's methodology. The soundness of the factual underpinnings of the expert's analysis and the correctness of the expert's conclusions based on that analysis are factual matters to be determined by the trier of fact, or, where appropriate, on summary judgment." Smith v. Ford Motor Co., 215 F.3d 713, 718 (7th Cir. 2000).

## C. GENERAL CAUSATION: EPIDEMIOLOGY, CASE STUDIES, ANIMAL STUDIES

1. **Epidemiology Trumps Conflicting Case Studies.** "We find that the district court did not abuse its discretion by considering that the proffered conclusions in studies with questionable methodologies were out of sync with the conclusions in the overwhelming majority of the epidemiological studies presented to the court." Allison v. McGhan Med. Corp., 184 F.3d 1300, 1316 (11th Cir. 1999).
2. **Epidemiology is Best Evidence in Toxic Tort Case.** "Epidemiology, a field that concerns itself with finding the causal nexus between external factors and disease, is generally considered to be the best evidence of causation in toxic tort actions." Rider v. Sandoz Pharmaceuticals Corp., 295 F.3d 1194, 1198 (11th Cir. 2002).
3. **Epidemiology Not Required In Toxic Tort Case.** "This Court has long held that epidemiology is not required to prove causation in a toxic tort case." Id. at 1199 (11th Cir. 2002) (citing Wells v. Ortho Pharm. Corp., 788 F.2d 741, 745 (11th Cir. 1986).
4. **Case Reports Are Insufficient.** "'[C]ase reports and case studies are universally regarded as an insufficient scientific basis for a conclusion regarding causation because case reports lack controls;' hence, they do not supply scientific knowledge upon which an opinion can be based under Daubert." Allison, 184 F.3d at 1316 (quoting Hall v. Baxter Healthcare Corp., 947 F.Supp. 1387, 1411 (D.Or. 1996).
5. **Case Studies Regarded With Caution.** "Because they are anecdotal, case studies lack controls and thus do not provide as much information as controlled epidemiological studies do.... Causal attribution based on case studies must be regarded with caution." McClain v. Metabolife Intern, Inc., 401 F.3d 1233, 1253 (11th Cir. 2005) (citing Mary Sue Henifin et al., Reference Guide on Medical Testimony, in Reference Manual on Scientific Evidence 439-75 (Federal Judicial Center, 2d ed. 2000)).
6. **Weight of the Evidence Approach.** "No serious argument can be made that the weight of the evidence approach is inherently unreliable. Rather, admissibility must turn on the particular facts of the case. Here, the question is whether Dr. Smith, in reaching his opinion, applied the methodology with 'the same level of intellectual rigor' that he uses in his scientific practice." Milward v. Acuity Specialty Products Group, Inc., 639 F.3d 11, 18-19 (1st Cir. 2011) (quoting Kumho, 526 U.S. at 152).

## D. SPECIFIC CAUSATION

1. **Need Differential Diagnosis + General Causation.** "A valid differential diagnosis, however, only satisfies a Daubert analysis if the expert can show the general toxicity of the drug by reliable methods." McClain v. Metabolife Intern, Inc., 401 F.3d 1233, 1241 (11th Cir. 2005).
2. **Relative Risk" Greater Than 2.0.** "The threshold for concluding that an agent more likely than not caused a disease is 2.0. A relative risk of 1.0 means that the agent has no causative effect on incidence. A relative risk of 2.0 thus implies a 50% likelihood that the agent caused the disease. Risks greater than 2.0 permit an inference that the plaintiff's disease was more likely than not caused by the agent." Allison v. McGhan Med. Corp., 184 F.3d 1300, 1315 (11th Cir. 1999) (citing Federal Judicial Center, Reference Manual on Scientific Evidence 168–69 (1994)).
3. **Physical Exam Not Necessary.** "[A] physician may reach a reliable differential diagnosis without himself performing a physical examination, particularly if there are other examination results available. In fact, it is perfectly acceptable, in arriving at a diagnosis, for a physician to rely on examinations and tests performed by other medical practitioners." Kannankeril v. Terminix Intern., Inc., 128 F.3d 802, 807 (3d Cir. 1997).

## E. STANDARD OF CARE OPINIONS

1. "Dr. Rosenthal's application of her extensive, relevant experience contributed to the reliability of her methodology. See, e.g., Dickenson v. Cardiac & Thoracic Surgery of E. Tenn., 388 F.3d 976, 982 (6th Cir.2004) (holding that the district court abused its discretion in excluding a doctor's standard-of-care testimony that was 'supported by extensive relevant experience')." Adams v. Lab. Corp. of America, 760 F.3d 1322, 1331 (11th Cir., July 29, 2014).
2. An expert's competence under state substantive law renders the expert qualified to testify as to the standard of care. See McDowell v. Brown, 392 F.3d 1283 (11th Cir. 2004); see also Adams v. Lab. Corp. of America, 760 F.3d 1322, 1338 (11th Cir. July 29, 2014) (J. Garza, concurring); Schneider v. Fried, 320 F.3d 396, 404 (3rd Cir. 2003).
3. "Thus, testimony on the standard of care usually concerns what other physicians do in similar situations, rather than whether the defendant–physician's diagnosis and treatment are based on good medical science (although customary physician practice and good medical science will generally coincide). As a result, the admissibility of expert opinion on the standard of care is decided according to whether the witness is qualified to opine on the same field as the malpractice defendant." Mary Sue Henifin et al., Reference Guide on Medical Testimony, in Reference Manual of Scientific Evidence, 446 (Federal Judicial Center, 2d ed. 2000). NOTE: The third edition on the Reference Manual on Scientific Evidence was published in 2011, but is completely silent on standard of care.

## F. ECONOMISTS

1. Magelky v. BNSF Ry. Co., 579 F.Supp.2d 1299, 1308 (D.N.D. 2008) (Economist's calculations based upon "peer group" analysis were reliable and sufficient to support testimony as to future wage loss.).
2. Pooshs v. Phillip Morris USA, Inc., 287 F.R.D. 543, 549 (N.D.CA. 2012) (Weaknesses in economist's testimony—such as only having an undergraduate degree in economics, spending most of his career as a litigation-based damages expert, and basing opinions on unreliable assumptions—could be brought out on cross examination and did not provide a basis for exclusion.).

## G. ACCIDENT RECONSTRUCTION

1. North v. Ford Motor, Co., 505 F.Supp.2d 1113, 1118 (D. Utah 2007) (allowing accident reconstruction expert to testify and use a PC Crash simulation when opinions were based on accident scene photos and measurements taken by Highway Patrol, even though expert never inspected the accident vehicle).

## H. AREAS OF QUESTIONING TO TEST RELIABILITY

1. What materials were you provided in this case? Who provided you with those materials? Did you ask counsel for any additional materials?
2. Please list each and every source of information you relied on in forming your opinions? Depositions read? Did you peruse or read the whole thing? Each and every medical record your reviewed? Going through each medical record/deposition/document from case:
   i. Find anything significant in that document?
   ii. Please describe the information in that document that supports your opinion.
3. Have you conducted any tests as part of your work in this case? If yes, when? Where? How? Why did you choose those parameters? What was your goal in performing the test? Did you form a hypothesis before the test? Differences between your test and the facts and circumstances in this case? Would they make a difference? Why not?
4. Has your opinion been tested by others? Previous to this litigation? Any conflicting results?
5. What information did you use to conduct the test? What factual assumptions did you make? How many times did you repeat the test? Are the results verifiable? Did you document the results? Did you document all stages of testing? Did you make any notes? Photos? Videos?
6. Have you ever conducted a test like this before? Where did you learn how to conduct the test? Any standard for conducting testing? ASTM? Governmental? Industry Organizations?
7. Do you perform similar tests in your professional life? Is this test or a similar test performed by professionals in your field? Is it known to be reliable?
8. Is there a better way to conduct the test, but you did not do it that way due to time/money/other reasons?
9. What did you calculate your error to be? Can you calculate an error rate?
10. Assume your opinion is wrong and invalid. What steps would you go through to analyze and assess the opinion to find your error?
11. Do the results of the test support the opinions? Did your opinions change in any way after conducting the test?
12. Did you test for other causes? Why/why not? Did you consider possible alternative explanations?
13. How did you go about trying to identify possible alternative causes? Please take us through the steps you took to rule them out? Any cofounding variables in your work?
14. What do you perceive as your purpose and function in this case?
15. What further work do you intend to do and what further work have you been asked to do for this case?
16. Have your opinions been peer-reviewed? Have you published anything related to your opinions in this case?
17. Have you relied on any publications in forming your opinions? Please list

each and every publication that supports your opinion?

18. Are your opinions/methods generally accepted? How do you know?
19. Did you conduct any research related to the issues in this case independent of litigation? Who funded the research? What was the purpose of research? What was the hypothesis?
20. Does opinion suffer from *post hoc ergo propter hoc* fallacy? Does expert speculate or make assumptions without proper basis?

# 6. Relevancy

## A. FIT

1. "The party offering the expert testimony has the burden of demonstrating that the testimony is 'relevant to the task at hand' and 'logically advances a material aspect' of its case. The 'basic standard of relevance ... is a liberal one,' but if an expert opinion does not have a 'valid scientific connection to the pertinent inquiry' it should be excluded because there is no 'fit.' Boca Raton Community Hosp., Inc. v. Tenet Health Care Corp., 582 F.3d 1227, 1232 (11th Cir. 2009) (citations omitted).
2. "Because scientific testimony does not assist the trier of fact unless it has a justified scientific relation to the facts, the Eleventh Circuit has opined that 'there is no fit where a large analytical leap must be made between the facts and the opinion.' An expert must know 'facts which enable him to express a reasonably accurate conclusion instead of mere conjecture or speculation,' and an expert's assurances that he has used generally accepted scientific methodology are insufficient. Further, to assist the trier of fact, expert testimony must concern 'matters that are beyond the understanding of the average lay person ... expert testimony generally will not help the trier of fact when it offers nothing more than what lawyers for the parties can argue in closing arguments.'" Block 60 Holdings, LLC v. Sothern-Owners, Ins. Co., 2015 WL 226008*3 (M.D.Fla., January 16, 2015) (finding civil engineers qualified and their opinions on sink holes reliable) (citations omitted).
3. "Plaintiffs' experts admitted that with respect to animal studies generally, what happens in an animal would not necessarily happen in a human being. Accordingly, it is necessary for plaintiffs to offer some rationale for the suggestion that the vascular structures of humans and animals are sufficiently similar in this context to conclude that bromocriptine's effects on animals may be extrapolated to humans. Plaintiffs have not done so. . . . As the Supreme Court held in Joiner, scientific evidence must 'fit' the plaintiff's theory of causation. In this case, neither the chemical compound evidence nor the animal study evidence 'fits' as evidence relevant to the cause of plaintiffs' injuries." Rider v. Sandoz Pharmaceuticals Corp., 295 F.3d 1194, 1202 (11th Cir. 2002).

# 7. Defeating *Daubert* Challenges

## A. PRACTICE TIPS

1. **Reference Manual on Scientific Evidence.** The Third Edition of the Reference Manual on Scientific Evidence is an invaluable resource and is relied on by the judiciary. Plus it's free. Just Google it, download it, and use it.
2. **Utilize Expert Reports.** While there is no requirement under Florida law for your expert to create an expert report, you may want to have your expert do so anyway. It will help the judge understand the expert's opinions much better than a deposition transcript.
3. **Stipulate to Confidentiality of Draft Reports.** While drafts of expert reports are not discoverable in federal court, they are completely discoverable in Florida's state courts. You may be able to stipulate with defense counsel at the beginning of a case that all draft reports and communications regarding expert reports will not be discoverable. Many if not most attorneys will agree. Confidentiality of draft reports is important because most experts do not know how to write a report that will meet all the Daubert requirements. They will need your guidance.
4. **Supplementing the Deposition.** You can supplement your expert's opinion with an affidavit from the expert. But, make sure that the affidavit only clarifies and does not contradict the deposition testimony. Also, you can request a Daubert hearing for your own expert, offering the judge the opportunity to speak directly to your expert.
5. **Motion to Admit Expert Testimony.** You can file what in essence is a preemptive Daubert motion—a motion to admit the testimony of your expert. You have the burden of proof so you can make an affirmative showing to the court whenever you feel you ready to do so instead of waiting for the opposing party to file one at the last minute. This also provides you with an opportunity to file a reply brief after the opposing party has responded to your motion.

## B. OUTLINE FOR EXPERT REPORTS

1. Summary/Roadmap of opinions.
2. Elaborate on the expert's qualifications and work/experience/research independent of litigation.
3. List case specific materials provided to and reviewed by the expert so the judge knows the opinions are based upon "sufficient facts and data." Be specific and thorough. Also list any other materials/sources/publications relied on or referenced by the expert.
4. Provide background information on the science involved in the case. Educate the judge.
5. Step by step narrative of the work and analyses the expert performed in the case. The judge should be able to follow the expert's thought process—from first being contacted through forming a final opinion. In other words, an expert must "show her work." Include pictures, illustrations, graphs, charts, etc., wherever possible.
6. Discuss how potential alternative causes were identified. Discuss the consideration and rejection of alternative causes.
7. Citations to (and discussion of) publications and authority that support the opinions.
8. Explanation of how the method used to reach the opinions in the case would have been acceptable in the relevant professional field and how professionals in the field would have relied upon the opinions reached in this manner.
9. Concise statement of each and every opinion – and sub-opinions, if any – using appropriate language as necessary (e.g., "more likely than not," "reasonable certainty," etc.).
10. Attach the expert's CV, bills for the case, and history of testimony as exhibits to the report.