

**MICHAEL ROBERTI, a Minor, etc., Plaintiff and Appellant, v. ANDY'S TERMITE
& PEST CONTROL, INC., Defendant and Respondent.**

B158393, B160331

**COURT OF APPEAL OF CALIFORNIA, SECOND APPELLATE DISTRICT,
DIVISION FOUR**

*113 Cal. App. 4th 893; 6 Cal. Rptr. 3d 827; 2003 Cal. App. LEXIS 1765; 2003 Cal.
Daily Op. Service 10216; 2003 Daily Journal DAR 12863*

November 26, 2003, Filed

SUBSEQUENT HISTORY: Rehearing denied by *Roberti v. Termite, 2003 Cal. App. LEXIS 1947 (Cal. App. 2d Dist., Dec. 19, 2003)*

PRIOR HISTORY: [***1] APPEAL from a judgment of the Superior Court of Los Angeles County, No. YC037356, Jean E. Matusinka, Judge.

DISPOSITION: Reversed and remanded.

CASE SUMMARY:

PROCEDURAL POSTURE: Plaintiff minor, by and through a guardian ad litem, sued defendant pest control company, alleging that his autism was caused by exposure to a pesticide applied by defendant at plaintiff's home. The Superior Court of Los Angeles County, California, granted defendant's motion in limine to exclude expert testimony on causation, entered a judgment of dismissal, and awarded costs to defendant. Plaintiff appealed.

OVERVIEW: In support of his theory that the pesticide caused his autism, plaintiff presented expert testimony of several toxicologists and medical doctors based on animal studies and to some extent upon physical examinations. In ruling the evidence inadmissible, the trial court stated that the analysis and causation opinions were not derived from accepted scientific methodology and noted that the consensus in the medical community was that there was no known cause of autism and that there was no consensus that pesticides caused autism. In reversing, the court held that the trial court incorrectly

applied the three-pronged Kelly test for threshold admissibility of evidence obtained through a new scientific technique. The court reasoned that the opinion testimony did not rely upon any new scientific technique, device, or procedure. Rather, it was the theory of causation that had not gained general acceptance, and a new theory of medical causation did not meet the predicate for application of the Kelly rule. Based on California Supreme Court precedent, the court declined to apply the federal Daubert standard, a more extensive admissibility test, to expert medical opinion concerning causation.

OUTCOME: The court reversed the judgment in defendant's favor and the award of costs and remanded the matter to the trial court for further proceedings consistent with the views expressed in the opinion. Costs on appeal were awarded to plaintiff.

CORE TERMS: scientific, exposure, autism, admissibility, expert testimony, causation, animal, reliability, medical opinion, new scientific technique, methodology, pesticide, threshold, medical community, brain damage, peer-reviewed, motion in limine, novel, predicate, Federal Rules of Evidence, relevant scientific community, gained general acceptance, expert opinion testimony, opinion testimony, evidence obtained, new scientific, et seq, three-pronged, toxicologist, opposing

LexisNexis (TM) HEADNOTES - Core Concepts:

Evidence > Witnesses > Expert Testimony

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[HN1] The rule that evidence obtained through a new scientific technique may be admitted only after its reliability has been established under a three-pronged test is applicable only to "new scientific techniques." It only applies to that limited class of expert testimony which is based, in whole or part, on a technique, process, or theory which is new to science and, even more so, the law. By reason of the potential breadth of the term "scientific" in the Kelly/Frye doctrine, the courts often refer to its narrow "common sense" purpose, i.e., to protect the jury from techniques which convey a misleading aura of certainty. A technique may be deemed "scientific" for purposes of Kelly/Frye if the unproven technique or procedure appears in both name and description to provide some definitive truth which the expert need only accurately recognize and relay to the jury.

Evidence > Witnesses > Expert Testimony

[HN2] Kelly analysis is limited to situations where it will forestall the jury's uncritical acceptance of scientific evidence or technology that is so foreign to everyday experience as to be unusually difficult for laypersons to evaluate. In most other instances, the jurors are permitted to rely on their own common sense and good judgment in evaluating the weight of the evidence presented to them. This approach is intended to prevent lay jurors from being unduly influenced by procedures which seem scientific and infallible, but which actually are not.

Evidence > Witnesses > Expert Testimony

[HN3] Under California law, the predicate for application of the Kelly rule is that the expert testimony is based, at least in some part, on a new scientific technique, device, procedure, or method that is not generally accepted in the relevant scientific community. The predicate is not that the opinion or underlying theory asserted by the expert is itself not generally accepted in the relevant scientific community or is faulty. Absent some special feature which effectively blindsides the jury, expert opinion testimony is not subject to Kelly-Frye.

Evidence > Witnesses > Expert Testimony

[HN4] California distinguishes between expert medical opinion and scientific evidence; the former is not subject to the special admissibility rule of Kelly-Frye. Kelly-Frye applies to cases involving novel devices or processes, not to expert medical testimony.

Evidence > Witnesses > Expert Testimony

[HN5] Medical theories of causation are not subject to the Kelly rule when they are based entirely upon generally accepted diagnostic methods and tests, including statistical studies that are not definitive.

Disagreement by an opposing party's expert with the conclusions a medical expert witness draws from accepted methods of scientific research does not make the challenged expert's methodology a new scientific technique. Opposing parties are free to present contrary expert testimony to refute a medical opinion because juries do not view the subjective thought processes of an expert as having the "aura of infallibility" they tend to attribute to scientific devices, techniques, or procedures.

Evidence > Witnesses > Expert Testimony

[HN6] Use of the Daubert threshold reliability test is not in keeping with the law in California. The California Supreme Court has refused to adopt the federal reliability test derived from *Fed. R. Evid. 702* established in Daubert. The California Supreme Court has noted that Kelly is applicable only to new scientific techniques. The Supreme Court did not suggest that the federal courts' application of the Daubert federal reliability test to all expert opinion testimony broadens the applicability of the Kelly test under California law to anything other than new scientific techniques. In addition, there is no authority or rationale to support the notion that on the one hand, the Kelly rule retains viability as to new scientific methodology, techniques, or devices, but on the other hand California courts may apply a Daubert threshold reliability analysis to everything else, including expert medical testimony and all other scientific and technical testimony that has already gained general acceptance.

Evidence > Relevance > Relevant Evidence

[HN7] In California, evidence is relevant only if it has any tendency in reason to prove or disprove any disputed fact. *Cal. Evid. Code* § 210.

Evidence > Witnesses > Expert Testimony

[HN8] An expert's testimony must be based on matter that is of a type that reasonably may be relied upon by an expert. *Cal. Evid. Code* § 801(b).

SUMMARY: [*893]

CALIFORNIA OFFICIAL REPORTS SUMMARY

An autistic minor, by and through his guardian ad litem, filed suit against a pest control company alleging causes of action for negligence, strict liability, breach of implied warranty, breach of express warranty, and negligent misrepresentation. The minor alleged that at his autism and/or brain damage was caused by a pesticide the company had applied at his home both before and after he was born, as well as while his mother was pregnant with him. In support of his theory, the minor presented expert testimony of several toxicologists and medical doctors in which each stated the opinion to a reasonable degree of medical or scientific certainty that

the minor's injuries and damages were caused by his household exposure to the pesticide. The pest control company filed a motion in limine to exclude the expert testimony. The trial court granted the motion finding that the experts' analysis and causation opinions were not derived from any accepted scientific methodology, were not scientifically valid, and did not possess evidentiary reliability. (Superior Court of Los Angeles County, No. YC037356, Jean E. Matusinka, Judge.)

The Court of Appeal reversed and remanded. The court held that the trial court erred by applying the three-pronged admissibility test applicable to evidence obtained through a new scientific technique to plaintiff's expert opinion testimony. The minor's experts based their opinion testimony upon research papers and studies in peer-reviewed journals regarding the pesticide and its effects, and to some extent upon physical examination of the autistic minor using techniques generally accepted in the relevant medical community. They did not rely upon any new scientific technique, device, or procedure that had not gained general acceptance in the scientific or medical community. Rather, it was their theory of causation, that the pesticide caused the minor's autism, that had not gained general acceptance in the relevant medical community. The three-pronged admissibility test applicable to evidence obtained through a new scientific technique was not applicable to the minor's proffered evidence, even though it presented a new theory of medical causation. The predicate for application of the three-pronged admissibility test [*894] is not that an opinion or underlying theory asserted by the expert is itself not generally accepted in the relevant scientific community or is faulty, it is that the expert opinion is, in at least some part, based on a new, not generally accepted scientific technique. Indeed, California courts exempt expert medical opinion from the special admissibility rule. The court held that the experts' opinion concerning causation of autism did not meet the predicate for application of the special admissibility rule. Likewise, the pest control company failed to demonstrate that the methodology used in the studies relied upon by experts was in any way novel or unaccepted in the scientific community, as to require application of the test. Finally, the Court of Appeal held that the foundational analysis and reliability test applied in the federal courts to all expert testimony did not apply to the expert medical opinion regarding causation. (Opinion by Vogel (C.S.), P. J., with Epstein, and Curry, JJ., concurring.)

HEADNOTES: CALIFORNIA OFFICIAL REPORTS HEADNOTES

Classified to California Digest of Official Reports

(1) Evidence § 87--Opinion Evidence--Subjects of Expert Testimony--Medical Theory of Causation--Three-pronged Admissibility Test Not Applicable.--

The three-pronged admissibility test applicable to evidence obtained through a new scientific technique was not applicable to expert opinion testimony based upon research papers and studies in peer-reviewed journals regarding a pesticide and its effects, and to some extent upon physical examination of a minor alleged to be autistic as a result of pesticide exposure using techniques that were generally accepted in the relevant medical community. The experts did not rely upon any new scientific technique, device, or procedure that had not gained general acceptance in the relevant scientific or medical community. Rather, it was their theory of causation, that a particular pesticide caused autism, that had not gained general acceptance in the relevant medical community. The admissibility test was not applicable even though the proffered evidence presented a new theory of medical causation.

[1 Witkin, Cal. Evidence (4th ed. 2000) Opinion Evidence, § 45 et seq.]

(2) Evidence § 87--Opinion Evidence--Subjects of Expert Testimony--Medical Theory of Causation--Three-pronged Admissibility Test Not Applicable.--

Application of a the three-pronged admissibility test applicable to evidence obtained through a new scientific technique to the testimony of toxicologists and medical doctors who opined that exposure to a pesticide caused a minor's autism, was directly contrary to California case law.

[*895] **(3) Evidence § 87--Opinion Evidence--Subjects of Expert Testimony--Evidence Obtained Through a New Scientific Technique--Three-pronged Admissibility Test--Predicate.--**Under California law, the predicate for application of the three-pronged admissibility test which establishes the reliability of scientific evidence is that the expert testimony is based, at least in some part, on a new scientific technique, device, procedure, or method that is not generally accepted in the relevant scientific community. The predicate is not that the opinion or underlying theory asserted by the expert is itself not generally accepted in the relevant scientific community or is faulty.

[1 Witkin, Cal. Evidence (4th ed. 2000) Opinion Evidence, § 45 et seq.]

(4) Evidence § 87--Opinion Evidence--Subjects of Expert Testimony--Medical Theory of Causation--Three-pronged Admissibility Test Not Applicable.--

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Contrary Expert Testimony.--Medical theories of causation are not subject to the three-pronged admissibility test applicable to evidence obtained through a new scientific technique when they are based entirely upon generally accepted diagnostic methods and tests, including statistical studies that are not definitive. Disagreement by an opposing party's expert with the conclusions a medical expert witness draws from accepted methods of scientific research does not make the challenged expert's methodology a new scientific technique subject to the test. Opposing parties are free to present contrary expert testimony to refute a medical opinion. Juries do not view the subjective thought processes of an expert as having the aura of infallibility they tend to attribute to scientific devices, techniques, or procedures.

[1 Witkin, Cal. Evidence (4th ed. 2000) Opinion Evidence, § 45 et seq.]

(5) Evidence § 81--Opinion Evidence--Expert Witnesses--Scientific and Technical Testimony--Expert Medical Opinion Testimony--Federal Reliability Test Not Applicable.--A federal evidentiary rule subjects all expert scientific and technical opinion testimony to a threshold reliability test under *Fed. Rules Evid., rule 702*. The federal reliability test, however, does not alter California law with regard to admissibility of expert medical opinion testimony.

[1 Witkin, Cal. Evidence (4th ed. 2000) Opinion Evidence, § 26 et seq.]

(6) Evidence § 87--Opinion Evidence--Subjects of Expert Testimony--Medical Theory of Causation--Federal Reliability Test Not Applicable.--Use of the federal threshold reliability test, to determine whether expert medical opinion that a pesticide was a causative agent in [*896] a minor's autism was supported by the proper foundation, was not in keeping with the law in California. The California Supreme Court had previously refused to adopt the federal reliability test derived from *Fed. Rules Evid., rule 702*, and established by the U.S. Supreme Court.

[1 Witkin, Cal. Evidence (4th ed. 2000) Opinion Evidence, § 45 et seq.]

COUNSEL: Robins, Kaplan, Miller & Ciresi, Steven D. Archer and Bree Arlyn-Pessin for Plaintiff and Appellant.

Charlston, Revich & Chamberlin, Alan H. Lazar and Thomas S. Flynn for Defendant and Respondent.

JUDGES: VOGEL (C.S.), P. J.; Epstein, and Curry, JJ., concurred.

OPINIONBY: C. S. Vogel VOGEL

OPINION:

[**828] VOGEL (C.S.), P. J.--

INTRODUCTION

Plaintiff Michael Roberti, a minor, by and through his guardian ad litem, Mary Roberti, appeals from a judgment of dismissal entered in favor of defendant Andy's Termite & Pest Control, Inc. Plaintiff alleged that he was injured as a result of his exposure to a pesticide applied by defendant at plaintiff's home. The trial court granted defendant's motion in limine to exclude the introduction of expert testimony to the effect that plaintiff's autism was caused by exposure to the pesticide, and thereafter entered a judgment of dismissal. Plaintiff contends on appeal that the expert testimony at issue is not subject to the admissibility test of *People v. Kelly* (1976) 17 Cal.3d 24 [130 Cal. Rptr. 144, 549 P.2d 1240], [***2] based upon which the trial court granted defendant's motion in limine. We agree and reverse the judgment in favor of defendant, concluding that the trial court applied a threshold admissibility test to plaintiff's expert testimony, akin to the federal rule of *Daubert*, n1 which is not applicable under California law.

n1 *Daubert v. Merrell Dow Pharmaceuticals, Inc.* (1993) 509 U.S. 579 [125 L. Ed. 2d 469, 113 S. Ct. 2786].

FACTUAL AND PROCEDURAL BACKGROUND

Variously stated, plaintiff suffers from "chronic static encephalopathy," brain damage ("mild central and cortical atrophy, generalized, and asymmetrical right greater than left"), cognitive impairment ("borderline IQ of 70-75"), [*897] and learning disabilities (developmental language disorder/delay and speech disorder). His brain damage manifests as "autism," sometimes called "autistic spectrum disorder" or "autism-like disorder." n2

n2 For purposes of this opinion, we conclude it makes no difference whether plaintiff suffers from autism as opposed to brain damage, etc. Our conclusion would be the same regardless of the precise label applied to his condition.

[***3]

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Plaintiff's operative second amended complaint for personal injuries and property damage filed August 1, 2000, alleged causes of action for negligence, strict liability, breach of implied warranty, breach of express warranty, and negligent misrepresentation. He alleged defendant applied a chemical called chlorpyrifos (marketed by Dow Chemical Corporation under the trade name Dursban, hereafter referred to as Dursban) at the Roberti home both before and after he was born, as well as while his mother was pregnant with him.

In support of his theory that Dursban caused his autism, plaintiff presented expert testimony of several toxicologists and medical doctors in which each stated the opinion to a reasonable degree of medical or scientific certainty that plaintiff's injuries and damages were caused by his household exposure to the Dursban used by defendant. n3 The experts based their [**829] opinions on plaintiff's medical records, including results of neuropsychological testing, and *in utero* and postpartum medical history, as well as on numerous peer-reviewed articles in scientific journals.

n3 Mohamed B. Abou-Donia, Ph.D., is an agricultural chemist and pesticide toxicologist at Duke University Medical Center; Edward R. Ritvo, M.D., specializes in mental retardation and child psychiatry and is a professor emeritus at the University of California, Los Angeles School of Medicine; Jack D. Thrasher, Ph.D., is an environmental toxicologist and immunotoxicologist who has taught at the University of California, Los Angeles School of Medicine, and University of Colorado School of Medicine; George Henry, Ph.D., is a pediatric neuropsychologist; and Ronald S. Gabriel, M.D., is plaintiff's treating pediatric neurologist.

[**4]

Before trial, defendant filed a motion in limine to exclude expert testimony regarding causation of plaintiff's autism and/or brain damage as a result of exposure to Dursban applied by defendant, contending that the expert opinions offered by plaintiff asserted only the possibility of such causation, and were unsupported by peer-reviewed scientific and medical literature. Defendant later filed an amended motion in limine, contending that plaintiff's expert testimony was based on novel methodologies of scientific proof unsupported by peer-reviewed scientific literature, i.e., did not meet the admissibility test set forth in *People v. Kelly*, *supra*, 17 Cal.3d 24. n4 Defendant further contended that the animal studies relied upon by plaintiff's expert toxicologists, [*898] Drs. Abou-Donia and Thrasher,

provided merely speculative support for the assertion that Dursban can cause autism in humans.

n4 The foundational requirement for admission of new scientific evidence in California, formerly referred to as the *Kelly/Frye* test (*Frye v. United States (D.C. Cir. 1923) 293 Fed. 1013, 54 U.S. App. D.C. 46*), is now referred to as the *Kelly* test or rule, and we do so here. (*People v. Bolden (2002) 29 Cal.4th 515, 545 [127 Cal. Rptr. 2d 802, 58 P.3d 931]*; *People v. Soto (1999) 21 Cal.4th 512, 515, fn. 3 [88 Cal. Rptr. 2d 34, 981 P.2d 958]*.) In *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, *supra*, 509 U.S. 579, 587, the United States Supreme Court held that the Federal Rules of Evidence had superseded *Frye*. However, we will sometimes use the *Kelly-Frye* designation when referencing prior case law that used that designation. We note that other state courts--which, like us, are not bound by the Federal Rules of Evidence--continue to adhere in both name and principle to the *Frye* test, the equivalent of the *Kelly* test in California. (See *Castillo v. E.I. DuPont de Nemours & Co., Inc. (Fla. 2003) 854 So. 2d 1264*.)

[**5]

Plaintiff filed opposition, contending the *Kelly* rule does not apply to expert medical opinion such as that involved here and that the court should otherwise refrain from evaluating the credibility and weight of the expert testimony, and defending reliance by Drs. Abou-Donia and Thrasher on peer-reviewed animal studies to extrapolate exposure and risk levels to humans. Plaintiff asserted that the United States Environmental Protection Agency's policy prohibits human experimentation, relies on and adopts animal studies as the scientific basis upon which to set pesticide exposure, dose and risk levels, and relied upon animal studies to ban residential applications of Dursban effective June 2000. Plaintiff presented a declaration by Dr. Thrasher in which the latter presented his calculations of the estimated airborne levels of Dursban to which Mary Roberti was exposed during the first trimester of her pregnancy, his opinion that such exposure constituted 100% of the minimum daily dose for a child (based on abundant scientific literature that Dursban can and does cross the placenta to a developing fetus, which has a ten-fold increased sensitivity to Dursban), and his conclusion that [**6] this exposure was sufficient to and did cause in utero brain damage to plaintiff.

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Defendant filed reply papers in which it argued that plaintiff's expert opinions were not supported by adequate foundation (including valid testimony regarding the dosage of Dursban to which plaintiff was exposed), that none of the human or animal studies relied upon involved exposures or conditions comparable to plaintiff's, and that a differential diagnosis to eliminate other causes of plaintiff's condition had not been done.

After reviewing the moving and opposing papers, the experts' depositions, declarations, [**830] and matter upon which the experts relied, the trial court held a hearing on the motion in limine. Thereafter the court granted the motion, ruling that "[t]he plaintiff's experts' analysis and causation opinions are not derived from any accepted scientific methodology, are not scientifically valid, and do not possess the evidentiary reliability required by *Kelly*. [P] The conclusions of plaintiff's experts suggest a causal relation based upon animal studies. The extrapolation of these animal studies to humans is speculative. The court must assure itself that opinions are based on relevant [***7] scientific [*899] methods, processes, and data and not upon an expert's mere speculation. In vivo and in vitro animal studies are insufficient to prove causation in human beings in the absence of confirmatory epidemiological evidence." The court further noted that "The consensus in the medical community is that there is no known cause of autism." Further, "There is no consensus among the scientific community that pesticides cause autism."

Defendant then brought an oral motion to dismiss the case, which the trial court granted; judgment was thereafter entered in defendant's favor. The court later denied plaintiff's motion to strike and/or tax costs, and costs were awarded to defendant. This consolidated appeal from the judgment and order awarding costs followed.

DISCUSSION

Plaintiff argues "the trial court misapplied the *Kelly* test, improperly assumed the jury's duty to weigh the factual and credibility issues raised by the admissible proffered medical and scientific opinions of plaintiff's experts and, apparently, personally disagreed with them."

Defendant contends, on the other hand, that the trial court did not err in applying *Kelly* to exclude the experts' theory that [***8] plaintiff's autism was caused by exposure to Dursban. It further contends that the trial court did not err in finding those theories were not generally accepted in the scientific community (*Kelly*'s first prong), and did not abuse its discretion in finding the experts' opinions were not based on proper scientific procedures (*Kelly*'s third prong).

Defendant argues that even if the *Kelly* test does not apply under these circumstances, the expert opinions were properly excluded because they were based on unreliable foundational matters, or upon no foundation at all. It contends the experts presented no foundation for their testimony on "general causation" that Dursban is capable of causing plaintiff's autism. It maintains that this is a case of low level, unmeasured, and unknown "chronic" exposure; that no peer-reviewed scientific literature was presented that demonstrates autism or brain damage can occur from such minimal exposure; that the scientific studies are unreliable as foundation because none of the studies involved exposures, dosages, or other circumstances even remotely comparable to this case; and the subjects of those studies displayed clinical symptoms after exposure, [***9] while Michael and his mother never displayed toxic symptoms.

I. Applicability of the *Kelly* Test

In *People v. Bolden*, *supra*, 29 Cal.4th 515, 544-545, the Supreme Court once again explained the *Kelly* rule as follows: "In *People v. Kelly*, *supra*, [**900] 17 Cal.3d 24 [130 Cal. Rptr. 144, 549 P.2d 1240] ... (*Kelly*), this court held that evidence obtained through a new scientific technique may be admitted only after its reliability has been established under a three-pronged test. The first prong requires proof that the technique is generally accepted as reliable in the relevant scientific community. (*Id.* [**831] at p. 30 [30 Cal.Rptr. 144, 549 P.2d 1240].) The second prong requires proof that the witness testifying about the technique and its application is a properly qualified expert on the subject. (*Ibid.*) The third prong requires proof that the person performing the test in the particular case used correct scientific procedures. (*Ibid.*)" (*People v. Bolden*, *supra*, 29 Cal.4th 515, 544-545.)

Recently in *People v. Mitchell* (2003) 110 Cal.App.4th 772 [2 Cal. Rptr. 3d 49], Division One of this district discussed the applicability and rationale [***10] behind the *Kelly* rule. " '*Kelly* is [HN1] applicable only to "new scientific techniques." [Citations.]' (*People v. Leahy* (1994) 8 Cal.4th 587, 605 [34 Cal. Rptr. 2d 663, 882 P.2d 321]) It ' "only applies to that limited class of expert testimony which is based, in whole or part, on a technique, process, or theory which is *new* to science and, even more so, the law." [Citation.]' (*Ibid.*) As stated by the *Leahy* court in discussing *People v. Stoll* (1989) 49 Cal.3d 1136 [265 Cal. Rptr. 111, 783 P.2d 698] ..., "by reason of the potential breadth of the term "scientific" in the *Kelly/Frye* doctrine, the courts often refer "to its narrow 'common sense' purpose, i.e., to protect the jury from techniques which ... convey a ' "misleading aura of certainty." ' [Citations.]" (49 Cal.3d at pp. 1155-1156)

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According to *Stoll*, a technique may be deemed "scientific" for purposes of *Kelly/Frye* if "the unproven technique or procedure appears in both name and description to provide some definitive truth which the expert need only accurately recognize and relay to the jury." (*Id.* at p. 1156 ..., italics added.) (*People v. Leahy*, supra, 8 Cal.4th at p. 606.) [***11]

"As explained in *People v. McDonald* (1984) 37 Cal.3d 351 [208 Cal. Rptr. 236, 690 P.2d 709]: "When a witness gives his personal opinion on the stand--even if he qualifies as an expert--the jurors may temper their acceptance of his testimony with a healthy skepticism born of their knowledge that all human beings are fallible. But the opposite may be true when the evidence is produced by a machine: like many laypersons, jurors tend to ascribe an inordinately high degree of certainty to proof derived from an apparently "scientific" mechanism, instrument, or procedure. Yet the aura of infallibility that often surrounds such evidence may well conceal the fact that it remains experimental and tentative. [Citation.] For this reason, courts have invoked the *Kelly-Frye* rule primarily in cases involving novel devices or processes such as lie detectors, "truth serum," Nalline testing, experimental systems of blood typing, "voiceprints," identification by human bite marks, microscopic analysis of gunshot residue, and hypnosis [citation], and, most recently, proof of guilt by "rape trauma syndrome" [citation]. In some [*901] instances the evidence passed the *Kelly-Frye* [***12] test, in others it failed; but in all such cases "the rule serves its salutary purpose of preventing the jury from being misled by unproven and ultimately unsound scientific methods." [Citation.] (*People v. McDonald*, supra, 37 Cal.3d at pp. 372-373 ..., overruled on another ground in *People v. Mendoza* (2000) 23 Cal.4th 896, 914 [98 Cal. Rptr. 2d 431, 4 P.3d 265])

"Thus, [HN2] *Kelly* analysis is limited to situations where it will 'forestall the jury's uncritical acceptance of scientific evidence or technology that is so foreign to everyday experience as to be unusually difficult for laypersons to evaluate. [Citation.] In most other instances, the jurors are permitted to rely on their own common sense and good judgment in evaluating the weight of the evidence presented to them. [Citations.]" (*People v. Venegas* (1998) 18 [*832] Cal.4th 47, 80 [74 Cal. Rptr. 2d 262, 954 P.2d 525])" (*People v. Mitchell* (2003) 110 Cal.App.4th 772, 782-783 [2 Cal. Rptr. 3d 49].)

"This approach is intended to prevent lay jurors from being unduly influenced by procedures which seem scientific and infallible, but which actually are not." (*People v. Webb* (1993) 6 Cal.4th 494, 524 [24 Cal. Rptr. 2d 779, 862 P.2d 779]. [***13] See, e.g., *People v. Therrian* (2003) 113 Cal.App.4th 609, p. 616 [

Cal.Rptr.3d ___] ["We are satisfied that no reasonable juror would mistake [the] expert's use of the [actuarial test used for sexually violent predators (SVP)] as a source of infallible truth on the issue of defendant's risk of reoffending."].)

We agree with plaintiff's contention that the trial court erred by applying the admissibility test of *People v. Kelly*, supra, 17 Cal.3d 24, 31, to plaintiff's expert opinion testimony that Dursban caused plaintiff's autism.

(1) Plaintiff's experts based their opinion testimony upon research papers and studies (primarily those conducted on animals) in peer-reviewed journals regarding Dursban and its effects, and to some extent upon physical examination of plaintiff using techniques that are generally accepted in the relevant medical community. They did not rely upon any new scientific technique, device, or procedure that has not gained general acceptance in the relevant scientific or medical community. Rather, it was the theory of causation, that Dursban caused plaintiff's autism, that has not gained general acceptance [***14] in the relevant medical community. The *Kelly* test is not applicable even though the proffered evidence presents a new theory of medical causation.

Defendant's primary contention is that an expert medical opinion advancing a theory of causation is subject to the reliability/admissibility test of *People v. Kelly*, supra, 17 Cal.3d 24, 31, because such an opinion is itself a novel scientific theory or method that creates a misleading aura of certainty [*902] by purporting to relay to the trier of fact a definitive truth derived from an unproven scientific technique or procedure. Defendant also asserts that plaintiff's experts' testimony regarding causation is subject to the *Kelly* test because it relies on studies that do not definitively demonstrate that Dursban causes autism or brain damage, and that involve animals rather than humans which were exposed to different levels of Dursban and with different modes of ingestion than plaintiff.

(2) We conclude the trial court's application of the *Kelly* test under these circumstances is directly contrary to California case law.

[HN3] (3) Under California law, the predicate for application of the *Kelly* rule is that the expert testimony [***15] is based, at least in some part, on a new scientific technique, device, procedure, or method that is not generally accepted in the relevant scientific community. The predicate is *not* that the opinion or underlying theory asserted by the expert is itself not generally accepted in the relevant scientific community or is faulty. "Absent some special feature which effectively blindsides the jury, expert opinion testimony is not subject to *Kelly-Frye*." (*People v. Stoll* (1989) 49

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Cal.3d 1136, 1155-1157 [265 Cal. Rptr. 111, 783 P.2d 698] [expert psychiatric opinion testimony that a defendant prosecuted for sexual offenses against minors does not display signs of sexual deviance or abnormality is not subject to the *Kelly* test because the opinion was based on the accepted interview techniques and interpretation of the results of generally accepted, standardized written personality tests, and did not carry a "misleading aura of scientific infallibility"]. Accord: *People* [*833] *v. Rowland* (1992) 4 Cal.4th 238, 266 [14 Cal. Rptr. 2d 377, 841 P.2d 897] [*Kelly* test is not applicable to expert medical opinion testimony that "the absence of genital trauma is not inconsistent [***16] with nonconsensual sexual intercourse"; i.e., rape does not always cause genital trauma]; *People v. McDonald* (1984) 37 Cal.3d 351, 372-373 [208 Cal. Rptr. 236, 690 P.2d 709] [expert opinion testimony on accuracy of eyewitness testimony is not subject to the *Kelly* test because it was not based on unproven "scientific mechanism, instrument or procedure"]; *People v. Therrian*, *supra*, 113 Cal.App.4th 609 at p. 615 [actuarial test used as one tool in predicting whether SVP would reoffend not subject to *Kelly* test; psychological evaluation is a learned professional art rather than the purported exact science with which *Kelly* is concerned]; *People v. Bui* (2001) 86 Cal.App.4th 1187, 1195-1196 [103 Cal. Rptr. 2d 908] [expert scientific opinion testimony that ingestion of quantities of methamphetamines exceeding therapeutic dosage causes impaired driving ability is not subject to the *Kelly* test because it is not based on any "novel process or new scientific technique or device," but, rather, on accepted epidemiological studies correlating methamphetamine blood levels with driving impairment]; *Wilson v. Phillips* (1999) 73 Cal.App.4th 250, 253-257 [86 Cal. Rptr. 2d 204] [***17] [expert medical opinion testimony that a person had repressed real memories of childhood sexual [*903] molestation and recalled them accurately during adulthood is not subject to the *Kelly* test because it was derived from established medical interview techniques and the physician's personal evaluation of the victim]; *People v. Ward* (1999) 71 Cal.App.4th 368, 373 [83 Cal. Rptr. 2d 828] [testimony of a psychologist assessing whether a convicted sex offender is a sexually violent predator and likely to re-offend is not subject to the *Kelly* test because the opinion was based on conventional interview techniques].)

People v. Ward, *supra*, 71 Cal.App.4th at page 373, concisely summarizes the point: [HN4] "California distinguishes between expert medical opinion and scientific evidence; the former is not subject to the special admissibility rule of *Kelly-Frye*. (*People v. McDonald* (1984) 37 Cal.3d 351, 372-373 [208 Cal. Rptr. 236, 690 P.2d 709].) *Kelly-Frye* applies to cases involving novel devices or processes, not to expert

medical testimony, such as a psychiatrist's prediction of future dangerousness or a diagnosis of mental illness. [Citation.]"

The [***18] extent to which expert medical opinion testimony is exempted from the *Kelly* rule is illustrated by our Supreme Court's comment in *People v. McDonald*, *supra*, 37 Cal.3d 351 at page 373: "We have never applied the *Kelly-Frye* rule to expert medical testimony, even when the witness is a psychiatrist and the subject matter is as esoteric as the reconstitution of a past state of mind or the prediction of future dangerousness, or even the diagnosis of an unusual form of mental illness not listed in the diagnostic manual of the American Psychiatric Association. [Citation.]"

(4) *Wilson*, *supra*, 73 Cal.App.4th 250, and *Bui*, *supra*, 86 Cal.App.4th 1187, specifically hold that [HN5] medical theories of causation are not subject to the *Kelly* rule when they are based entirely upon generally accepted diagnostic methods and tests, including statistical studies that are not definitive. *Bui*, at page 1196, reiterates the established principle that disagreement by an opposing party's expert with the conclusions a medical expert witness draws from accepted methods of scientific research "does not make [the challenged expert's] methodology a new scientific technique." *Bui* and [***19] other cases point out that opposing parties [*834] are free to present contrary expert testimony to refute a medical opinion because juries do not view the subjective thought processes of an expert as having the "aura of infallibility" they tend to attribute to scientific devices, techniques, or procedures. (*Bui*, *supra*, at pp. 1195-1196.)

Under these principles, the medical opinion drawn by plaintiff's experts concerning causation of autism clearly does not meet the predicate for application of the *Kelly* rule. Nor did the defendant demonstrate that the methodology used in the studies relied upon by plaintiff's experts, including [*904] the use of animal studies to extrapolate to effects of a substance on humans, is in any way *novel* or *unaccepted* in the scientific community, requiring application of the *Kelly* test. Defendant's objections are actually to the conclusions plaintiff's experts reached based on the studies available, not with the methodology used in the studies, upon which the experts relied in reaching their conclusions. Defendant's argument in this regard, and the trial court's ruling, instead pertains to the weight of the underlying bases for the expert [***20] opinion, not its admissibility. The court here rejected as speculative the expert opinions to the extent they relied on animal studies. As we discuss in the next section, in so doing the court was in effect applying an admissibility test which is contrary to California law. Thus, the trial court erred in granting defendant's motion in limine to exclude plaintiff's expert

testimony and thereafter granting a judgment of dismissal.

II. A *Daubert* Analysis Is Not Applicable in California

Defendant argues that, even if we conclude the *Kelly* test is not applicable to the expert medical testimony here, the trial court was still correct in excluding it based on its purported lack of an adequate foundation. Defendant contends that we should apply the foundational analysis employed in the federal courts to all expert testimony, an analysis the California Supreme Court has explicitly rejected.

(5) The federal rule established in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, *supra*, 509 U.S. 579 (*Daubert*) subjects *all* expert scientific and technical opinion testimony to a threshold reliability test (under rule 702 of the *Federal Rules of Evidence* [***21], which superseded the *Frye* test in federal courts as of 1993). *Daubert*, however, does not alter California law with regard to admissibility of expert medical opinion testimony.

Defendant's arguments on appeal closely parallel the reasoning and analysis in *National Bank of Commerce v. Dow Chemical Co.* (E.D. Ark. 1996) 965 F. Supp. 1490, in which a child alleged that *in utero* exposure [**835] to Dursban caused her to suffer from birth defects. That case followed federal law requiring application of the broad threshold reliability test to all scientific and technical expert opinion testimony. Under *Daubert* and the Federal Rules of Evidence it interprets, a district court must first determine whether the reasoning or methodology underlying the testimony is scientifically valid; unlike the *Kelly* test, however, general acceptance in the scientific community of the underlying methodology is not necessarily required. *In addition*, the district court must also conduct *preliminary fact-finding*, to make a preliminary assessment of whether the reasoning or methodology underlying the testimony properly can be applied to the facts in issue. (*National Bank of Commerce v. Dow Chemical Co.*, *supra*, 965 F. Supp. at pp. 1495-1496, [***22] citing *Daubert*, *supra*, at pp. 592-595.)

[*905] The district court in *National Bank of Commerce* applied that test and ruled that plaintiff failed to establish that her exposure to Dursban caused birth defects, where the expert testimony was based on what the court deemed to be studies involving inappropriate protocol and methodology and inadequate exposure and dosage levels, and on animal studies whose applicability to humans was speculative.

A contrary view was expressed in *Castillo v. E.I. DuPont de Nemours & Co., Inc.*, *supra*, 854 So. 2d 1264, 1273. There, the Supreme Court of Florida, a *Frye* state,

in an action for personal injury due to *in utero* fungicide exposure, held admissible expert testimony based on animal studies, where the expert "relied upon the basic principle of toxicology and pharmacology that in qualitative extrapolation, one can usually rely on the fact that a compound causing an effect in one mammalian species will cause it in another species."

What defendant would have us do, under the guise of determining whether the challenged testimony was supported by the proper foundation, is conduct a *Daubert*-style analysis, precisely [***23] as the court did in *National Bank of Commerce*, *supra*, 965 F. Supp. 1490 [HN6] (6) Use of the *Daubert* threshold reliability test is not, however, in keeping with the law in California. In *People v. Leahy* (1994) 8 Cal.4th 587 [34 Cal. Rptr. 2d 663, 882 P.2d 321], our Supreme Court refused to adopt the federal reliability test derived from *Federal Rules of Evidence* rule 702 established in *Daubert*. Citing *People v. Stoll*, *supra*, 49 Cal.3d 1136, the *Leahy* court noted that "*Kelly* is applicable only to new scientific techniques." (*Leahy*, *supra*, at p. 605.) The Supreme Court did not suggest that the federal courts' application of the *Daubert* federal reliability test to *all* expert opinion testimony broadens the applicability of the *Kelly* test under California law to anything other than new scientific techniques. In addition, there is no authority or rationale to support the notion impliedly promoted by defendant that on the one hand, the *Kelly* rule retains viability as to new scientific methodology, techniques, or devices, but on the other hand California courts may apply a *Daubert* threshold reliability analysis to everything [***24] else, including expert medical testimony and all other scientific and technical testimony that has already gained general acceptance.

We note the existence of *People v. Mitchell* (2003) 110 Cal.App.4th 772 [2 Cal. Rptr. 3d 49], in which the appellate court held the *Kelly* test applicable to the use of a scent transfer device for a canine scent identification lineup. *In dicta*, the court stated as follows: "[R]egardless of whether evidence is deemed 'scientific,' it will not be admitted unless it is relevant. In *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, *supra*, 509 U.S. at page 597 ..., the United States Supreme Court determined that the *Frye* standard had been superseded by the Federal Rules of Evidence because ' "[g]eneral acceptance" is not a necessary precondition to the admissibility of scientific [*906] evidence' under the Federal Rules, which 'assign to the trial judge the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand. Pertinent evidence based on scientifically valid principles will satisfy those demands.' In *People v. Leahy*, *supra*, 8 Cal.4th 587 ..., the California [***25] Supreme Court concluded that *Daubert* did not provide cause for this state to abandon

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Kelly. Nonetheless, the *Leahy* court recognized that provisions of our Evidence Code 'seem the functional equivalent' of the Federal Rules of Evidence relied on in *Daubert*. (*People v. Leahy, supra, 8 Cal.4th at p. 598*)

[HN7] "In California evidence is relevant only if it has 'any tendency in reason to prove or disprove any disputed fact' (*Evid. Code, § 210*). And [HN8] an expert's testimony must be [**836] based on matter 'that is of a type that reasonably may be relied upon by an expert' (*id., § 801, subd. (b)*). (See *People v. Leahy, supra, 8 Cal.4th at pp. 597-598*)" n5 (*People v. Mitchell, supra, 110 Cal.App.4th 772, 783-784.*)

n5 In addition, defendant points out that *Evidence Code section 803* provides that a trial court "may, and upon objection shall, exclude testimony in the form of an opinion that is based in whole or in significant part on matter that is not a proper basis for such an opinion."

[***26]

The testimony offered by plaintiff's experts in this case both had the tendency in reason to prove causation, and was based on studies and protocol of a type that reasonably may be relied upon by a medical expert witness. Unless and until our Supreme Court determines

that the *Daubert* analysis is applicable in California, we will adhere to the rule of *People v. Kelly* and its progeny, and refuse to apply a more extensive preliminary admissibility test as in *Daubert* to expert medical opinion concerning causation. In contrast to the *Mitchell* court's interpretation of *Leahy*, our reading of *Leahy* instead indicates that the Supreme Court has rejected the broader federal rule and reaffirmed its adherence to the narrower *Kelly* rule. (*People v. Leahy, supra, at pp. 604-605.*)

In effect the trial court denied plaintiff the right to present evidence to a jury in support of his case, without complying with the procedural rules governing dismissal of a cause of action for insufficiency of the evidence by way of a motion for summary judgment before trial or nonsuit or directed verdict during trial. We therefore reverse the judgment in defendant's favor. [***27] In addition, of course, we also reverse the award of costs in defendant's favor.

[*907] DISPOSITION

The judgment in favor of defendant, including the award of costs, is reversed and the matter remanded to the trial court for further proceedings consistent with the views expressed in this opinion. Costs on appeal are awarded to plaintiff.

Epstein, J., and Curry, J., concurred