S132167

IN THE SUPREME COURT OF CALIFORNIA

ANTONIO AGUILAR, et al.,
Plaintiffs, Appellants, and Petitioners
vs.
EXXONMOBIL CORPORATION, et al.,
Defendants and Respondents.

"LOCKHEED LITIGATION CASES"
(GROUP 4 AND 5 RETRIAL PLAINTIFFS)

AFTER A DECISION BY THE COURT OF APPEAL
SECOND APPELLATE DISTRICT, DIVISION THREE
CASE NO. B166347

ANSWER BRIEF ON THE MERITS

[Submitted Concurrently with Application for Leave to File Oversize Brief]

HORVITZ & LEVY LLP
ELLIS J. HORVITZ (ST. BAR # 22682)
DAVID M. AXELRAD (ST. BAR # 75731)
MARY-CHRISTINE SUNGAILA (ST. BAR # 156795)
15760 VENTURA BOULEVARD, 18TH FLOOR
ENCINO, CALIFORNIA 91436-3000
(818) 995-0800 • FAX (818) 995-3157
[EHORVITZ@HORVITZLEVY.COM] • [DAXELRAD@HORVITZLEVY.COM]
[MSUNGAILA@HORVITZLEVY.COM]

ATTORNEYS FOR DEFENDANTS AND RESPONDENTS
EXXONMOBIL CORPORATION and
UNION OIL COMPANY OF CALIFORNIA dba UNOCAL

STEPTOE & JOHNSON LLP
LAURENCE F. JANSSEN (ST. BAR # 147471)
LAWRENCE P. RIFF (ST. BAR # 104826)
633 WEST FIFTH STREET, 7TH FLOOR
LOS ANGELES, CALIFORNIA 90071
(213) 439-9400 • FAX (213) 439-9599
[LJANSSEN@STEPTOE.COM]
[LRIFF@STEPTOE.COM]

ATTORNEYS FOR DEFENDANT AND RESPONDENT
EXXONMOBIL CORPORATION

MORGAN, LEWIS & BOCKIUS LLP
V. THOMAS MEADOR III (St. Bar # 82553)
DEANNE L. MILLER (St. Bar # 185113)
300 S. Grand Avenue, 22nd Floor
Los Angeles, California 90071-3132
(213) 612-2500 • FAX (213) 612-2554
[TMEADOR@MORGANLEWIS.COM]
[DLMILLER@MORGANLEWIS.COM]

ATTORNEYS FOR DEFENDANT AND RESPONDENT
UNION OIL COMPANY OF CALIFORNIA

TABLE OF CONTENTS

Page

TABLE OF AUTHORITIES iv

INTRODUCTION 1

STATEMENT OF THE CASE 3

A. Overview of the Lockheed Litigation 3

B. In the previous Group 6B trial, the trial court excluded the cancer causation testimony of Dr. Teitelbaum for lack of foundation. The Court of Appeal affirmed the subsequent judgments in the defendants' favor, and plaintiffs did not seek review in this court 5

C. The trial court agrees to hold a similar hearing for plaintiffs' expert general causation testimony in the Group 4/5 retrial 8

D. The trial court receives briefing and holds an evidentiary hearing to determine the admissibility of plaintiffs' expert testimony concerning causation 9

E. The court issues a tentative ruling excluding Dr. Teitelbaum's testimony and offers the plaintiffs additional opportunities to supplement the testimony's inadequate foundation. Plaintiffs decline to do so 10

F. The trial court excludes Dr. Teitelbaum's testimony 12

G. The plaintiffs represent that, in light of the court's exclusionary ruling, they are unable to proceed to trial. Rather than defend a subsequent summary judgment motion, the plaintiffs ask the court to dismiss their claims. At the trial court's invitation, Exxon and Unocal then successfully move to dismiss the Group 4 and 5 plaintiffs' claims 16

H. The trial court enters judgment in favor of Exxon and Unocal. The Court of Appeal affirms and denies rehearing. This Court grants review 17

LEGAL DISCUSSION 19

I. EVIDENCE CODE SECTIONS 801 AND 803 REQUIRE TRIAL COURTS TO ASSESS THE RELIABILITY AND TRUSTWORTHINESS OF AN EXPERT'S OPINION BEFORE ALLOWING THAT TESTIMONY TO BE ADMITTED INTO EVIDENCE 19

A. Evidence Code section 801 requires a trial court to examine an expert's opinion to determine whether it is based on the type of matter an expert in the same field would reasonably rely on to provide the particular opinion being offered. Where, as here, the examination reveals that the opinion is based on speculation, conjecture or other improper matter, the court must exclude it under Evidence Code section 803 19

B. Dr. Teitelbaum's general causation testimony was properly excluded because none of the materials he relied on actually supported his opinions 31

C. The reasoning and holding in *Roberti* do not require a different result 35

II. THE TRIAL COURT'S POWER TO DETERMINE THE RELIABILITY OF THE BASES FOR EXPERT TESTIMONY DOES NOT INVADE THE PROVINCE OF THE JURY 37

A. The Evidence Code expressly assigns to the trial judge the task of determining the admissibility of expert testimony, including any associated factfinding 37

B. The trial court's decision concerning the admissibility of expert testimony does not violate the plaintiffs' right to a jury trial 41

C. The Legislature's decision to separate the admissibility determination from the decision on the merits of the case comports with what recent social science research demonstrates: the value of having different factfinders determine each aspect of a case 42

III. THE EMERGING CONSENSUS IN SISTER STATES AND AMONG LEADING EVIDENCE SCHOLARS IS THAT TRIAL JUDGES MUST ENSURE THE RELIABILITY OF EXPERT TESTIMONY BEFORE ALLOWING SUCH TESTIMONY TO BE HEARD BY A JURY 46

CONCLUSION 55

CERTIFICATE OF WORD COUNT
(Cal. Rules of Court, rule 28.1(d)(1)) 56

TABLE OF AUTHORITIES

Page

Cases

Aguilar v. Lerner
(2004) 32 Cal.4th 974 34

Amorgianos v. National Railroad Passenger Corp.
(E.D.N.Y. 2001) 137 F.Supp.2d 147 6

Arellano v. Moreno
(1973) 33 Cal.App.3d 877 20

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(N.H. 2002) 813 A.2d 409 47

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(1996) 46 Cal.App.4th 476 26

Brock v. Merrell Dow Pharmaceuticals, Inc.
(5th Cir. 1989) 874 F.2d 307 14

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(D.Mont. 1999) 77 F.Supp.2d 1153 6

Bunting v. Jamieson
(Wyo. 1999) 984 P.2d 467 47

Bushling v. Fremont Medical Center
(2004) 117 Cal.App.4th 493 . . . . 29, 36

Campbell-Perfilio v. PennDOT
(Pa.Com.Pl. 2004) 2004 WL 2212894 48

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(N.D.Cal. 1995) 877 F.Supp. 1380 15

Cases	Page

Christian v. Gray
(Okla. 2003) 65 P.3d 591 47

City of San Diego v. Sobke
(1998) 65 Cal.App.4th 379 22

Com. v. Lanigan
(Mass. 1994) 641 N.E.2d 1342 47

In re Commitment of Simons
(Ill. 2004) 821 N.E.2d 1184 47

Correa v. Superior Court
(2002) 27 Cal.4th 444 21

Courtaulds Fibers, Inc. v. Long
(Ala. 2000) 779 So.2d 198 48

DiPetrillo v. Dow Chemical Co.
(R.I. 1999) 729 A.2d 677 46

Donaldson v. Central Illinois Public Service Co.
(Ill. 2002) 767 N.E.2d 314 47

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(Tex. 1995) 923 S.W.2d 549 47

Eisenmayer v. Leonardt
(1906) 148 Cal. 596 21

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(Ark. 2000) 14 S.W.3d 512 47

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(Md.App. 2003) 831 A.2d 481 46

Goeb v. Tharaldson
(Minn. 2000) 615 N.W.2d 800 . . . . 46, 52

Cases	Page

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(Pa. 2003) 839 A.2d 1038 48

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(9th Cir. 2002) 292 F.3d 1124 6

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(Ga.Ct.App. 2004) 602 S.E.2d 297 47

Howerton v. Arai Helmet, Ltd.
(N.C. 2004) 597 S.E.2d 674 . . . . 46, 51

Jackson v. County of Los Angeles
(1997) 60 Cal.App.4th 171 34

Jehl v. Southern Pac. Co.
(1967) 66 Cal.2d 821 . . . . 37, 41, 42

Jennings v. Palomar Pomerado Health Systems, Inc.
(2003) 114 Cal.App.4th 1108 . . . . 27, 36

John v. Im
(Va. 2002) 559 S.E.2d 694 47

Kane v. Motorola, Inc.
(Ill.App.Ct. 2002) 779 N.E.2d 302 48

Kelley v. Trunk
(1998) 66 Cal.App.4th 519 . . . . 27, 30

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(N.J. 2002) 809 A.2d 7 46

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(1982) 133 Cal.App.3d 907 30

Koo v. Rubio's Restaurants, Inc.
(2003) 109 Cal.App.4th 719 34

Cases	Page

Korsak v. Atlas Hotels, Inc.
(1992) 2 Cal.App.4th 1516 .... 26, 28

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(2004) 115 Cal.App.4th 283 22

Kuhn v. Sandoz Pharmaceuticals Corp.
(Kan. 2000) 14 P.3d 1170 48

Landrigan v. Celotex Corp.
(N.J. 1992) 605 A.2d 1079 49

Leslie G. v. Perry & Associates
(1996) 43 Cal.App.4th 472 30

Lockheed Litigation Cases
(2004) 115 Cal.App.4th 558 .... *passim*

Lockheed Martin Corp. v. Superior Court
(2003) 29 Cal.4th 1096 .... 29, 30

Logerquist v. McVey
(Ariz. 2000) 1 P.3d 113 48

Lupash v. City of Seal Beach
(1999) 75 Cal.App.4th 1428 30

Luque v. McLean
(1972) 8 Cal.3d 136 .... 23, 28

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(Del.Super.Ct. 1999) 737 A.2d 513 47

In re Marriage of Hewitson
(1983) 142 Cal.App.3d 874 26

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(Tenn. 1997) 955 S.W.2d 257 46

Cases	Page

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(2002) 98 Cal.App.4th 1098 27

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(Ind. 1997) 682 N.E.2d 1289 46

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(1939) 36 Cal.App.2d 199 37

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(Ohio 1998) 687 N.E.2d 735 47

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(Miss. 2003) 863 So.2d 31 47

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(Ky. 1995) 908 S.W.2d 100 47

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(N.D. 2001) 630 N.W.2d 62 46

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(Mich.App. 1997) 566 N.W.2d 671 46

Owens v. Silvia
(R.I. 2003) 838 A.2d 881 49

Pacific Gas & Electric Co. v. Zuckerman
(1987) 189 Cal.App.3d 1113 . . . . 21, 22, 28, 30

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(N.Y.App.Div. 2005) 793 N.Y.S.2d 434 . . . . 46, 50

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(1953) 119 Cal.App.2d 393 29

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(2004) 116 Cal.App.4th 1253 25

Cases	Page

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(1968) 69 Cal.2d 122 30

People v. Bledsoe
(1984) 36 Cal.3d 236 24

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(2002) 29 Cal.4th 381 25

People v. Gardeley
(1996) 14 Cal.4th 605 . . . . 19, 29

People v. Kelly
(1976) 17 Cal.3d 24 . . . . 24, 35, 36

People v. King
(1968) 266 Cal.App.2d 437 38

People v. Luis
(1910) 158 Cal. 185 21

People v. Mitchell
(2003) 110 Cal.App.4th 772 36

People v. Ramos
(1997) 15 Cal.4th 1133 . . . . 20, 24, 25

People v. Shreck
(Colo. 2001) 22 P.3d 68 46

People v. Stoll
(1989) 49 Cal.3d 1136 . . . . 23, 24, 26

People v. Venegas
(1998) 18 Cal.4th 47 24

People v. Wesley
(N.Y. 1994) 633 N.E.2d 451 . . . . 46, 49

Cases	Page

People v. Wharton
(1991) 53 Cal.3d 522 30

Place v. Workmen's Comp. App. Bd.
(1970) 3 Cal.3d 372 26

Estate of Powers
(1947) 81 Cal.App.2d 480 21

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(Wash. 1995) 907 P.2d 282 48

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(1978) 79 Cal.App.3d 57 29

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(11th Cir. 2002) 295 F.3d 1194 14

Roberti v. Andy's Termite & Pest Control, Inc.
(2003) 113 Cal.App.4th 893 . . . . 32, 35

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(1996) 44 Cal.App.4th 634 30

Roscoe Moss Co. v. Jenkins
(1942) 55 Cal.App.2d 369 21

Rowe v. Superior Court
(1993) 15 Cal.App.4th 1711 41

Rutherford v. Owens-Illinois, Inc.
(1997) 16 Cal.4th 953 6

Saelzler v. Advanced Group 400
(2001) 25 Cal.4th 763 30

Sanderson v. IFF
(C.D.Cal. 1996) 950 F.Supp. 981 14

Cases	Page

Schafersman v. Agland Coop
(Neb. 2001) 631 N.W.2d 862 47

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(1940) 16 Cal.2d 460 41

Siharath v. Sandoz Pharmaceuticals Corp.
(N.D.Ga. 2001) 131 F.Supp.2d 1347 14

Smith v. ACandS, Inc.
(1994) 31 Cal.App.4th 77 26

Soldo v. Sandoz Pharmaceuticals Corp.
(W.D.Pa. 2003) 244 F.Supp.2d 434 14

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(1980) 105 Cal.App.3d 382 26

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(1999) 74 Cal.App.4th 1232 . . . . 26, 27

State Bd. of Registration for Healing Arts v. McDonagh
(Mo. 2003) 123 S.W.3d 146 46

State v. Adams
(Utah 2000) 5 P.3d 642 48

State v. Alberico
(N.M. 1993) 861 P.2d 192 47

State v. Ayers
(Mont. 2003) 68 P.3d 768 47

State v. Brown
(Or. 1984) 687 P.2d 751 46

State v. Coon
(Alaska 1999) 974 P.2d 386 47

Cases	Page

State v. Council
(S.C. 1999) 515 S.E.2d 508 46

State v. Davis
(Wis. 2002) 645 N.W.2d 913 48

State v. Foret
(La. 1993) 628 So.2d 1116 47

State v. Gleason
(Idaho 1992) 844 P.2d 69 46

State v. Hofer
(S.D. 1994) 512 N.W.2d 482 47

State v. Irving
(Me. 2003) 818 A.2d 204 46

State v. O'Key
(Or. 1995) 899 P.2d 663 . . . . 40, 49

State v. Porter
(Conn. 1997) 698 A.2d 739 . . . . 47, 48

State v. Vliet
(Hawaii 2001) 19 P.3d 42 46

Styles v. General Motors Corp.
(N.Y.App.Div., July 21, 2005)
_N.Y.S. 2d_[2005 WL 1692622] 50

Tilem v. City of Los Angeles
(1983) 142 Cal.App.3d 694 29

Toscano v. Greene Music
(2004) 124 Cal.App.4th 685 30

Cases	Page

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(Vt. 2004) 862 A.2d 269 47

Wade-Greaux v. Whitehall Laboratories, Inc.
(D.Virgin Islands 1994) 874 F.Supp. 1441 14

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(N.Y. 1999) 693 N.Y.S.2d 875 50

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(2000) 85 Cal.App.4th 1042 22

Whiteley v. Philip Morris, Inc.
(2004) 117 Cal.App.4th 635 6

Williams v. Hedican
(Iowa 1997) 561 N.W.2d 817 46

Wilt v. Buracker
(W.Va. 1993) 443 S.E.2d 196 47

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(1942) 52 Cal.App.2d 86 19

Constitutions **Page**

Cal. Constitution, art. I, § 16 41

Statutes

Evidence Code

§ 310 37

§ 400 38

§ 402 5

§ 403 . . . . 38, 39

§ 404 38

§ 405 . . . . 38, 39

§ 801 . . . . *passim*

§ 803 . . . . *passim*

Court Rules

California Rules of Court

rule 5.1(b)(4) 3

rule 28.1(d)(1) 56

Fed. Rules of Evid., rule 104 40

N.Y. Civ. Practice Law & Rules, § 4515 (McKinney 2005) 50

Miscellaneous **Page**

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Miscellaneous **Page**

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ANSWER BRIEF ON THE MERITS

INTRODUCTION

In this coordinated proceeding known as the "*Lockheed Litigation*," former workers at Lockheed's aerospace plant in Burbank claim they were harmed by chemical manufacturers and suppliers' failure to adequately warn of hazards associated with products allegedly supplied to Lockheed. The plaintiffs' claims have proceeded to trial separately in small groups.

On appeal here, plaintiffs in what is known as the Group 4 and 5 retrial proceedings argued that the trial court abused its discretion by excluding the testimony of their sole general causation expert, Dr. Daniel Teitelbaum, because it lacked a reliable foundation. The Court of Appeal upheld the resulting judgment in favor of defendants ExxonMobil Corporation (Exxon)

and Union Oil Company of California dba Unocal (Unocal). The Court of Appeal concluded that the trial court did not abuse its discretion because Dr. Teitelbaum's testimony was based on matter that did not support his conclusions about the ability of the products at issue to cause the types of harm plaintiffs allegedly suffered. The Court of Appeal was right.

The trial court did not, as plaintiffs claim, apply an unusually searching review of the foundation for Dr. Teitelbaum's testimony in order to determine its reasonable reliability and admissibility. Applying provisions of the California Evidence Code, and consistent with century-old as well as recent case law, the trial court essentially asked only one threshold, commonsense question: "Could an expert rely on the foundational material Dr. Teitelbaum relied upon to give the particular opinion offered by Dr. Teitelbaum in this case, without resorting to speculation or conjecture as the basis for the opinion?" The trial court correctly answered "no" to this question because none of the foundational materials Dr. Teitelbaum relied on supported his opinion that the chemicals at issue were capable of causing the plaintiffs' claimed injuries.

For over 100 years, California courts have prevented experts from testifying about their opinions where, as here, those opinions are based upon nothing more than speculation and conjecture. The trial court's longstanding and established role in this regard has become increasingly important as the use of expert testimony has expanded and, with advancements in science, the nature of expert testimony has grown correspondingly more complex.

The Court of Appeal's application of Evidence Code sections 801 and 803 in this case ensures that, as the use of expert testimony expands, trial courts will use their statutory authority to assess the adequacy of the foundation for an expert's opinion and the reliability of an expert's testimony. Giving effect to the Evidence Code does not invade the province of the jury,

as plaintiffs contend; rather, it follows the Legislature's mandate that trial courts ensure only admissible expert testimony is introduced in any trial.

STATEMENT OF THE CASE[1]

A. Overview of the Lockheed Litigation.

Lockheed, a well-known manufacturer in the aerospace industry, maintained facilities in Burbank where the F117 "Stealth" fighter and other secret military aircraft were manufactured. (5 AA 903.) Over a decade ago, more than 600 current and former Lockheed workers sued their employer, claiming that chemical substances to which they were exposed on the job caused them injuries as a result of Lockheed's deliberately lax safety procedures and fraudulent concealment of known chemical hazards. (See, e.g., 1 AA 1-7; 5 AA 899.) The workers also sued chemical manufacturers and suppliers, including defendants, claiming that their alleged failure to adequately warn of hazards associated with the chemical products they allegedly supplied to Lockheed caused the workers harm. (See 5 AA 898; see, e.g., 1 AA 18-24, 28-30.)

Although filed separately, the workers' claims were coordinated for separate, consecutive, back-to-back trials before one judge, in groups of 15 to 40 plaintiffs per trial. Prior to the first trial, Lockheed settled. The plaintiffs pursued their claims against over 30 product suppliers on a theory of breach

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1/ All citations to the Appellants' Appendix in this appeal are noted as "AA." The record from an earlier appeal, known as the Group 6B appeal, was incorporated by reference and relied on by the trial court in this case. (See 6 RT 119-124; 14 RT 388-391.) The entire Group 6B record is incorporated by reference into the Respondents' Appendix on this appeal pursuant to California Rules of Court, rule 5.1(b)(4). Citations to the Appellants' Appendix of the Group 6B appeal (*Lockheed Litigation Cases* (2004) 115 Cal.App.4th 558) are referred to as "AA(6B)."

of the duty to warn.

The claims of a small group of plaintiffs were tried first. In that trial, the issue of the adequacy of defendants' warnings was bifurcated from the issues of causation and damages. The jury returned verdicts against three defendants, none of whom is involved in the present appeal. (See 5 AA 900; 17 AA(6B) 4573.) The Court of Appeal affirmed the judgment, concluding, inter alia, that there was substantial evidence of inadequacy of warning, causation, and damages, and that the trial court did not abuse its discretion by bifurcating the trial. (See 5 AA 900; 17 AA(6B) 4572-4591.) [2/]

Judgments entered against defendants in the subsequent Group 2 and Group 3 trials were also affirmed on appeal. (See 5 AA 901-902; 17 AA(6B) 4593-4688.)

The Court of Appeal reversed the judgments against the defendants in the Group 4 and 5 trials. The court concluded that new trials should be held on plaintiffs' claims due to the prejudicial misapplication of collateral estoppel

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2/ Contrary to plaintiffs' contention (see OBOM, p. 3), the Court of Appeal did not determine the sufficiency of plaintiffs' causation evidence as to these defendants, or the products at issue here, in this earlier appeal. While the Group 1 appellate opinion did include an analysis of the sufficiency of the evidence concerning causation, it did not concern any of the defendants in this appeal or any of the chemicals at issue here. (See OBOM, p. 3, citing 19 AA 4154-4159). Nor has the Court of Appeal determined the sufficiency of the causation testimony at issue here in any of the other appeals. As the Court of Appeal explained when, for the first time, it considered a trial court order excluding the testimony of Dr. Teitelbaum in the Group 6B appeal: "the fact that the Court of Appeal has affirmed judgments for the plaintiffs in prior trials does not indicate that the appellate court in those appeals necessarily decided that Dr. Teitelbaum's expert testimony was admissible or sufficient to support a verdict. Plaintiffs have not shown that the admissibility or sufficiency of Dr. Teitelbaum's testimony was disputed or decided in the prior appeals, and our review of the appellate opinions reveals that the appellate court did not decide those questions." (*Lockheed Litigation Cases*, *supra*, 115 Cal.App.4th at p. 566.)

to prior juries' findings of warning inadequacy. (5 AA 919-935, 945-955.) The court also concluded that plaintiffs had presented no evidence of oppressive conduct by the defendants warranting punitive damages, stating that "there is absolutely no evidence that any vile, base, contemptible, miserable, wretched, or loathsome conduct that would be despised by ordinary decent people was engaged in by any defendant or its employees." (5 AA 929; see also 5 AA 959.) Accordingly, the court determined that judgment should be entered in the defendants' favor on the punitive damage claims. (5 AA 934-935, 956, 962-966.)

On remand, the Group 4 and 5 plaintiffs' claims were consolidated for retrial. (See 10 AA 2087-2089.) This appeal involves the claims of these fourth and fifth groups of plaintiffs.

B. In the previous Group 6B trial, the trial court excluded the cancer causation testimony of Dr. Teitelbaum for lack of foundation. The Court of Appeal affirmed the subsequent judgments in the defendants' favor, and plaintiffs did not seek review in this court.

Before the Group 4 and 5 plaintiffs' cases that are the subject of this appeal were retried, the trial court severed out for trial all wrongful death claims, consolidated them as a separate group designated "Group 6B" (see 3 AA(6B) 659) and, pursuant to a case management order, held a hearing in the Group 6B case under Evidence Code section 402 on the issue of general causation, i.e., a particular chemical's capacity to cause the type of adverse health effects purportedly suffered by a plaintiff (9 AA(6B) 2305).[3/]

3/ Proof of causation necessarily includes a threshold inquiry and determination whether, in reasonable medical probability, a particular chemical is capable of causing in humans the type of harm suffered by the (continued...)

At the Group 6B hearing, plaintiffs proffered a single expert on general causation, Dr. Daniel Teitelbaum, who in turn relied on a survey of epidemiology studies for his causation opinion. (*Lockheed Litigation Cases*, *supra*, 115 Cal.App.4th at p. 562.)[4/]

After extensive briefing and a hearing, the court excluded Dr.

3/ (...continued)
plaintiff (i.e., "general causation"). (See generally *In re Hanford Nuclear Reservation Litigation* (9th Cir. 2002) 292 F.3d 1124, 1133; *Amorgianos v. National Railroad Passenger Corp.* (E.D.N.Y. 2001) 137 F.Supp.2d 147, 161, 177-178.) If the answer is that the chemical does not possess that capacity, then the chemical cannot have been a cause of the particular plaintiff's claimed harm. But if the chemical does have that capacity, then the causation inquiry becomes whether the plaintiff's exposure to the chemical in question was in reasonable medical probability a substantial factor in causing this particular plaintiff's harm (i.e., "specific causation"). (See *Rutherford v. Owens-Illinois, Inc.* (1997) 16 Cal.4th 953, 982 [substantial factor standard for proving causation: plaintiff must establish "in reasonable medical probability that a particular exposure or series of exposures was a 'legal cause' of his injury, i.e., a *substantial factor* in bringing about the injury"]; *Whiteley v. Philip Morris, Inc.* (2004) 117 Cal.App.4th 635, 701; see also 17 AA(6B) 4599-4600 [Group 2 appellate opinion: *Rutherford* substantial factor standard applies here]; see generally *In re Hanford Nuclear Reservation Litigation*, *supra*, 292 F.3d at p. 1133; *Amorgianos v. National Railroad Passenger Corp.*, *supra*, 137 F.Supp.2d at pp. 161, 177-178; *Brumbaugh v. Sandoz Pharmaceutical Corp.* (D.Mont. 1999) 77 F.Supp.2d 1153, 1155, fn. 1 [no need to reach issue of specific causation if plaintiff cannot first demonstrate general causation].)

4/ "Epidemiology is the study of the incidence and distribution of disease in human populations." (8 AA(6B) 2189; see also 8 AA(6B) 2209, 2216.) "Epidemiologic evidence identifies agents that are associated with an increased risk of disease in groups of individuals, quantifies the amount of excess disease that is associated with an agent, and provides a profile of the type of individual who is likely to contract a disease after being exposed to an agent." (8 AA(6B) 2216-2217.) "Epidemiology focuses on the question of general causation (i.e., is the agent capable of causing disease?) rather than that of specific causation (i.e., did it cause disease in a particular individual?)." (8 AA(6B) 2217, fn. omitted.)

Teitelbaum's testimony on two alternative grounds: (1) the increased risks of cancer identified in the survey on which Dr. Teitelbaum relied for his opinion were not tied to exposure to any of the five specific chemicals at issue and, as a result, the survey did not show these specific chemicals were capable of causing the types of cancer plaintiffs suffered; and (2) the survey did not show a sufficient increase in the incidence of the type of cancers at issue. (*Lockheed Litigation Cases*, *supra*, 115 Cal.App.4th at p. 562.)

The Court of Appeal affirmed the subsequent judgment in favor of the defendants on the ground that the survey Dr. Teitelbaum relied upon failed to support an opinion that the five chemicals at issue (as opposed to the many other chemicals in the survey) were capable of causing cancer. In so doing, the court observed that "[a]n expert opinion has no value if its basis is unsound. [Citations.] Matter that provides a reasonable basis for one opinion does not necessarily provide a reasonable basis for another opinion . . . the matter relied on must provide a reasonable basis for the particular opinion offered, and [] an expert opinion based on speculation or conjecture is inadmissible." (*Lockheed Litigation Cases*, *supra*, 115 Cal.App.4th at p. 564.) The court reasoned that the survey Dr. Teitelbaum relied on "showed that painters who potentially were exposed to a long list of more than 130 substances and thousands of chemical compounds contracted cancer at a rate greater than the national average. The study did not indicate, however, whether persons exposed to only the five chemicals supplied by Exxon and Union Oil contracted cancer at a rate greater than the national average, because the study subjects were exposed to many other chemicals, including known carcinogens. Dr. Teitelbaum's opinion that Plaintiffs' exposure to chemicals supplied by Exxon and Union Oil caused a greater incidence of cancer therefore was based on conjecture and speculation as to which of the many substances to which the study subjects were exposed contributed to the greater

incidence of cancer." (*Id.* at pp. 564-565.)

Plaintiffs did not seek review of this decision. They did, however, seek depublication of the opinion, which this court declined to order.

C. The trial court agrees to hold a similar hearing for plaintiffs' expert general causation testimony in the Group 4/5 retrial.

In the Group 4/5 retrials, Exxon and Unocal requested similar foundational hearings for plaintiffs' expert testimony concerning the ability of the five chemicals at issue to cause the chronic medical conditions plaintiffs allegedly experienced from long-term chemical exposure. (6 AA 1259 to 8 AA 1799; see also 3 AA 462-464 [case management order provisions regarding 402 hearings].)[5/]

Over plaintiffs' opposition (see 9 AA 2022 to 10 AA 2086), the trial court agreed to hold a hearing to examine the foundation for and admissibility of plaintiffs' expert testimony on general causation, i.e, the ability of the chemicals at issue to cause the types of harm allegedly suffered by the Group 4/5 plaintiffs (4 RT 72-74, 97-99; 6 RT 118-119; 8 RT 218-221; 10 AA 2093-2097). The trial court gave the parties wide latitude as to the type of evidence they could present at the hearing, and how they could present it. (4 RT 97-99.) The court made clear that it would not weigh the testimony of the parties' experts; rather, the trial court would examine the plaintiffs' expert testimony alone to determine its admissibility. (6 RT 118-119, 121-124; 8 RT 208.)

5/ The solvents at issue in the Group 4/5 proceeding are the same as those at issue in the prior Group 6B appeal: MEK, acetone, isopropyl alcohol, toluene and Super High Flash Naphtha. (10 AA 2110; 39 AA 9478.) The injuries at issue include respiratory injuries and diseases, central nervous system and peripheral nervous system disorders, skin damage, and liver and kidney disease. (10 AA 2116-2118; 39 AA 9478.)

D. The trial court receives briefing and holds an evidentiary hearing to determine the admissibility of plaintiffs' expert testimony concerning causation.

Plaintiffs provided testimony from a single expert (Dr. Teitelbaum) on the issue of general causation. Plaintiffs submitted three separate declarations by Dr. Teitelbaum (10 AA 2106-2167; 14 AA 2964-3028; 36 AA 8662-8671), in which he concluded that the five chemicals at issue in this case were substantial factors in causing the plaintiffs' injuries.[6/]

Dr. Teitelbaum acknowledged that the epidemiology studies on which he relied focused on mixed chemical exposures rather than the effects of individual chemicals. (See 14 RT 357-358, 378-382; 10 AA 2133-2134; see also 14 RT 360-363.) He further admitted that, excluding the animal studies on which he relied, he had no basis to conclude that the chemicals in question were individually capable of causing any of the chronic irreversible harm suffered by the plaintiffs in this case. (14 RT 378-382; see also 10 AA 2118-2119, 2133-2134; 22 AA 5233-5235; 34 AA 8395-8396.)

Dr. Teitelbaum attached to his declarations copies of the epidemiology studies, animal studies, case reports, treatises, textbooks and toxic registries which formed the bases for his opinions. (10 AA 2109-2110; 11 AA 2169 to 13 AA 2938; 19 AA 4263 to 22 AA 5147; 29 AA 7178 to 30 AA 7274;

6/ Specifically, Dr. Teitelbaum concluded that the five chemicals had both acute and chronic effects of the following types: irritant and allergic, neurotoxic (nerve), nephrotoxic (kidney), and hepatotoxic (liver) (see, e.g., 10 AA 2119). However, he did not distinguish between long-term irreversible (chronic) and short-term reversible (acute) effects (even though acute effects were not at issue at this stage of the proceeding). (14 RT 357-358, 376-382; 39 AA 9478; see also 27 AA 6470-6471, 6486-6487; 31 AA 7551 [Dr. Teitelbaum defines what he means by "acute" and "chronic"].)

36 AA 8672-8888.)[7/]

Exxon and Unocal objected to the foundation for Dr. Teitelbaum's opinions on several grounds. (See 14 AA 2951-2963.)

E. The court issues a tentative ruling excluding Dr. Teitelbaum's testimony and offers the plaintiffs additional opportunities to supplement the testimony's inadequate foundation. Plaintiffs decline to do so.

In June 2002, more than a month after the evidentiary hearing at which Dr. Teitelbaum testified concerning the foundation for his general causation opinions, the trial court advised that it was inclined to exclude Dr. Teitelbaum's testimony. (16 RT 441-446.) The court announced that, before

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7/ As plaintiffs note in their opening brief (see OBOM, pp. 9, 15), Dr. Teitelbaum also attached material safety data sheets with defendants' warnings for the products at issue. (16 AA 3457-3633; 17 AA 3636-3898; 18 AA 3899-4151.) The trial court necessarily determined that these warnings provided no support for Dr. Teitelbaum's general causation opinions. Plaintiffs never challenged this implicit portion of the court's ruling in the Court of Appeal. Nor do they do so in their opening brief on the merits in this court.

Dr. Teitelbaum also submitted thousands of pages of his prior deposition and trial testimony in the *Lockheed Litigation*. (See 22 AA 5148 to 23 AA 5313; 23 AA 5380-5469; 23 AA 5556 to 24 AA 5709; 25 AA 6031-6151; 26 AA 6225 to 27 AA 6491; 27 AA 6559 to 28 AA 6724; 28 AA 6738 to 29 AA 7177; 30 AA 7275 to 35 AA 8661.) Most of this testimony made no reference to any supporting studies or other foundation for Dr. Teitelbaum's opinions. To the extent Dr. Teitelbaum did make reference to studies in his prior testimony, he did not provide copies of any of the referenced studies for the court to review. (See, e.g., 22 AA 5243-5244; 23 AA 5303-5304, 5308-5313; 26 AA 6234-6243; 29 AA 7000-7006, 7096-7103, 7140-7155; 30 AA 7454; 31 AA 7534-7540; 32 AA 7763, 7887-7888; 34 AA 8515-8522.) The trial court struck Dr. Teitelbaum's trial testimony on the grounds it lacked foundation. (See 39 AA 9434-9435, 9492, 9506.) Plaintiffs have never challenged this ruling on appeal either.

any formal ruling was made, it wanted to give plaintiffs the opportunity to supplement what the court considered to be "an inadequate record regarding . . . a critical part of the plaintiffs' case" – the extrapolation of the results of animal studies to humans. (*Ibid.*) The court stated that it planned to make the same ruling it did in Group 6B concerning the insufficiency of mixed solvent epidemiology studies to support an opinion about an individual solvent's ability to cause harm. (See 16 RT 442-445.) The court further observed that, since Dr. Teitelbaum had already admitted there were no other human studies examining the chemicals at issue individually, the admissibility of the animal studies Dr. Teitelbaum relied on became "the heart of the plaintiff's case." (16 RT 443.) The court requested briefing on the use of animal studies, and offered the plaintiffs several opportunities to augment the record in any way they wanted on the issue. (16 RT 441-443, 448-455; see also 17 RT 468-482; 18 RT 493-501, 503-504.)

On August 8, 2002, the court issued a tentative ruling on the admissibility of Dr. Teitelbaum's general causation testimony, to which the parties were invited to file objections. (See 39 AA 9421, 9423-9471; see also 18 RT 503-504.) Accompanying the tentative ruling was a "Notice re tentative and right to call additional witnesses and or offer additional evidence," in which the court observed that "this ruling is in effect a termination order for many plaintiffs equivalent to a non suit" and therefore plaintiffs would "be given every opportunity to supply evidence to the court" on issues the court determined to be problematic for the plaintiffs. (39 AA 9423.) In particular, the court asked counsel to explain: (1) how human studies involving groups of multiple known and unknown chemicals could be extrapolated to individual known chemicals; and (2) whether it is scientifically permissible to extrapolate from animals to humans on the issue of causation and, if so, under what circumstances. (39 AA 9423-9424.)

Plaintiffs declined to supplement the record. (See 19 RT 528-529; see also 17 RT 478 [in response to court's invitation to supplement the record, plaintiffs acknowledge they have the "ultimate burden of proof" to establish the admissibility of their own expert's testimony].) Exxon and Unocal in turn declined to submit further briefing. (19 RT 529.)

F. The trial court excludes Dr. Teitelbaum's testimony.

On September 13, 2002, the trial court issued its final ruling excluding Dr. Teitelbaum's testimony. (39 AA 9474-9506.) The court determined that "[w]hether underlying data support an expert's opinion and may reasonably be relied upon to form such an opinion depends on what the opinion is." (39 AA 9479, 9488.) The court then examined the studies, articles and treatises Dr. Teitelbaum relied on to determine whether they supported his opinion. (39 AA 9477, 9483, 9484-9506.)

The court first examined the epidemiology studies relied on by Dr. Teitelbaum, all of which involved exposures to multiple solvent mixtures. The court concluded that "plaintiffs' studies do not justify the assumption that because an illness occurs after a 'multi solvent exposure' that ipso facto each chemical in the mix is an active agent or a contributive cause. One or more of the chemicals may in fact be 'a cause' or a 'substantial factor' but this should be supported by some sort of scientific data that supports a decision about a particular chemical." (39 AA 9493.)[8/] As Dr. Teitelbaum admitted, none of

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8/ As plaintiffs acknowledge, the epidemiology studies Dr. Teitelbaum relied on involved mixtures of many organic solvents. (See OBOM, p. 10, fn.7) None of them provided data to establish that the five chemicals at issue, as opposed to other chemicals in the mixtures studied, were associated with an increased risk of causing the adverse health effects at issue. (See, e.g., 14 RT 346-349, 359-363, 376-382; 11 AA 2181-2186, 2187-2194, 2198-
(continued...)

the epidemiology studies said anything about any individual chemical's ability to cause the chronic adverse health effects at issue, but concluded only that the complex *mixture* of chemicals studied *might* have played a role in causing an increased risk of illness. (See, e.g., 14 RT 357-358, 360-363, 378-382.)

In addition, the court reasoned that "Dr. Teitelbaum never explains how one may take a group of known chemicals where harm has been found and single out one of them as a causative agent. He also fails to explain how one can extrapolate from a known chemical that causes harm to other chemicals and assert these different chemicals 'individually' cause harm when in groups. Finally, he does not explain how one can extrapolate from a study with unknown organic solvents in making conclusions about a particular solvent. None of the cited studies do this." (39 AA 9494; see also 39 AA 9497-9506.) Indeed, the epidemiology studies Dr. Teitelbaum relied on either did not include the five chemicals at issue or failed to identify the components of the chemical mixtures being studied, and none of the epidemiology studies showed which chemicals in the mixture were associated with any risk of harm. (See, e.g., 14 RT 346-349, 359-363, 376-382; 11 AA 2181-2186, 2187-2194, 2198-2202, 2210-2215, 2216-2221, 2352-2364, 2368-2375, 2378-2383; 12 AA 2530-2534, 2535-2539, 2575-2581, 2582-2586, 2597-2606, 2652-2656; 13 AA 2692-2696, 2725-2729, 2749-2756, 2782-2788, 2789-2793, 2801-2806, 2807-2812, 2813-2822, 2856-2865.)

8/ (...continued)
2202, 2210-2215, 2216-2221, 2326-2346, 2352-2364, 2368-2375, 2378-2383; 12 AA 2530-2534, 2535-2539, 2575-2581, 2582-2586, 2597-2606, 2652-2656; 13 AA 2692-2696, 2725-2729, 2749-2756, 2782-2788, 2789-2793, 2801-2806, 2807-2812, 2813-2822, 2856-2865, 2917-2923, 2924-2933, 2934-2938; 21 AA 4867-4875, 4888-4925; see also 12 AA 2609-2612 [studies of the unpleasant (non toxic) effects of solvent vapors]; 12 AA 2666-2669 [study of short-term high-concentration exposures to acetone – not long-term, chronic, low-level exposures like those at issue here – and appropriate workplace threshold limit values].)

In examining the use of animal studies, the court identified several extrapolation problems: "First, animals and humans are not the same species. [Citations.] Second, animal studies are aimed at discovering a dose response relationship . . . [not] an association between exposure and disease. [Citations.] Finally, animal studies raise questions regarding dosage, conditions under which the study is administered, time of exposure, and purpose of the study." (39 AA 9494.)[9/] The court indicated that, because plaintiffs had not submitted materials to explain how the animal studies Dr. Teitelbaum relied on could be extrapolated to humans, the record was inadequate for the admission of his opinion based on those studies. (39 AA 9495; see also 39 AA 9497.)

9/ Other courts and commentators – including plaintiffs' own expert, Dr. Teitelbaum (see 34 AA 8380-8381) – have recognized that animal studies are not necessarily probative of causation in humans. (See, e.g., 22 AA 5104-5105; 38 AA 9273, 9277-9279, 9287-9288; see also 29 AA 6939; *Wade-Greaux v. Whitehall Laboratories, Inc.* (D.V.I. 1994) 874 F.Supp. 1441, 1453-1455, 1483-1484; *Siharath v. Sandoz Pharmaceuticals Corp.* (N.D.Ga. 2001) 131 F.Supp.2d 1347, 1366-1367; *Rider v. Sandoz Pharmaceuticals Corp.* (11th Cir. 2002) 295 F.3d 1194; *Brock v. Merrell Dow Pharmaceuticals, Inc.* (5th Cir. 1989) 874 F.2d 307, 314; *Soldo v. Sandoz Pharmaceuticals Corp.* (W.D.Pa. 2003) 244 F.Supp.2d 434, 466, 474-477, 546-548; *Sanderson v. IFF* (C.D.Cal. 1996) 950 F.Supp. 981, 997; see generally Landau, *Of Mice and Men: The Admissibility of Animal Studies to Prove Causation in Toxic Tort Litigation* (1988/1989) 25 Idaho L.Rev. 521, 541-548; Comment, *Rats in the Courtroom: The Admissibility of Animal Studies in Toxic Tort Cases* (1987) 2 J. Envtl. L. & Litig. 229, 234, fn. 25, 236, 241.)

The court also rejected the case reports [10/] Dr. Teitelbaum relied on, stating that these anecdotal reports of individual experiences provided an insufficient foundation for his opinion about the chemicals' general ability to cause the harm at issue. (39 AA 9495-9496.) Similarly, the court concluded, inter alia, that the textbooks, treatises and registries[11/] Dr. Teitelbaum relied on provided an insufficient basis for his causation opinion because they concluded there was only a possible association or link between the chemicals and diseases at issue (which was insufficient to support an opinion that these chemicals "more probably than not" cause the diseases) and did not distinguish between acute and chronic effects. (39 AA 9496-9497; see also 39 AA 9497-9506.)

10/ Case reports are anecdotal reports of individual patients' illnesses that are published in medical journals because they chronicle a unique illness, a possible new association between an illness and exposure to a substance, an unexpected course of illness, or unique or unusual circumstances of exposure. (13 AA 2912.) Unlike epidemiology studies, case reports "simply describe[] reported phenomena without comparison to the rate at which the phenomena occur in the general population or in a defined control group; do not isolate and exclude potentially alternative causes; and do not investigate or explain the mechanism of causation." (*Casey v. Ohio Medical Products* (N.D.Cal. 1995) 877 F.Supp. 1380, 1385.)

11/ A registry collects and disseminates information about the known or suspected adverse health effects associated with different substances. (See 36 AA 8663-8667, 8673-8688, 8697-8726.)

G. The plaintiffs represent that, in light of the court's exclusionary ruling, they are unable to proceed to trial. Rather than defend a subsequent summary judgment motion, the plaintiffs ask the court to dismiss their claims. At the trial court's invitation, Exxon and Unocal then successfully move to dismiss the Group 4 and 5 plaintiffs' claims.

After discussing the best method of disposing of the Group 4 and 5 plaintiffs' claims in light of the court's ruling on the admissibility of Dr. Teitelbaum's general causation testimony, plaintiffs' counsel suggested that the court dismiss the claims on its own motion so that plaintiffs would not be forced to oppose a summary judgment motion. (20 RT 537-540.) The trial court encouraged the parties to consider whether this was the procedure they wanted to adopt. (20 RT 540-541.)

One week later, plaintiffs' counsel returned to court and represented that, in light of the court's ruling excluding Dr. Teitelbaum's testimony, the Group 4 and 5 plaintiffs were unable to proceed to trial on their claims. (21 RT 551-552.) Based on plaintiffs' counsel's representation, counsel for Exxon and Unocal moved to dismiss all of the Group 4 and 5 plaintiffs' claims scheduled for retrial. (*Ibid.*) The court then dismissed the Group 4 and 5 plaintiffs' claims with prejudice and stayed all other proceedings in the coordinated litigation pending appellate court review of the Group 4 and 5 judgment. (21 RT 548-556; see also 39 AA 9510-9514.)

H. The trial court enters judgment in favor of Exxon and Unocal. The Court of Appeal affirms and denies rehearing. This Court grants review.

The trial court entered judgment in favor of Exxon and Unocal on the Group 4 and 5 retrial plaintiffs' claims on January 22, 2003. (39 AA 9515-9529.) Plaintiffs appealed. (39 AA 9551-9554.)

The Court of Appeal affirmed, holding (1) the trial court properly concluded that "the multiple-solvent epidemiological studies showing an association between exposure to multiple solvents and various ailments did not support the conclusion that any one of the solvents at issue here can cause a disease" (typed opn., p. 16); and (2) the trial court did not err in concluding that the animal studies Dr. Teitelbaum relied on provided no reasonable basis for his opinion because Dr. Teitelbaum did not adequately explain why his reliance on these studies was warranted (typed opn., p. 25). The court also upheld the trial court's determinations that the case reports and toxicology treatises upon which Dr. Teitelbaum relied did not provide a foundation for his opinions. (Typed opn., pp. 25-27.)

The Court of Appeal confirmed the discretion that trial judges have under California law to exclude expert testimony that lacks an adequate foundation: "A court determining whether there is a reasonable basis for an expert opinion under Evidence Code section 801, subdivision (b), must examine the matter that the expert relied on in [ ] forming his or her opinion. This limited analysis involves reviewing the matter relied on and understanding the matter to the extent necessary to determine for itself whether it can provide a reasonable basis ('reasonably may be relied upon' (Evid. Code, § 801, subd. (b))) for the expert's opinion. A court conducting this analysis must not weigh the probative value of the opinion, substitute its own

opinion for the expert's opinion, or presume to be an expert. Rather, the analysis is limited to determining whether the matter relied on can provide a reasonable basis for the opinion or, on the other hand, reveals that the opinion is based on a leap of logic, conjecture, or artifice." (Typed opn., p. 13.) The Court of Appeal determined that the trial court in this case "carefully heeded the legal limitations on its role in determining whether Dr. Teitelbaum's opinion was based on matter that provides a reasonable basis for his opinion" and did not "improperly weigh[ ] the evidence or usurp[ ] the jury's role as trier of fact." (Typed opn., p. 14.)

Plaintiffs sought rehearing, which the Court of Appeal denied. This court then granted review of plaintiffs' petition, which raised a single issue: whether the Evidence Code permits a trial court "to conduct its own review of the scientific evidence underlying an expert's opinion to determine for itself whether the evidence adequately supports the proffered opinion before allowing it to be presented to the jury." (Petition for Review, p. 1.) As we now explain, the answer is irrefutably "yes."

LEGAL DISCUSSION

I.

EVIDENCE CODE SECTIONS 801 AND 803 REQUIRE TRIAL COURTS TO ASSESS THE RELIABILITY AND TRUSTWORTHINESS OF AN EXPERT'S OPINION BEFORE ALLOWING THAT TESTIMONY TO BE ADMITTED INTO EVIDENCE.

A. Evidence Code section 801 requires a trial court to examine an expert's opinion to determine whether it is based on the type of matter an expert in the same field would reasonably rely on to provide the particular opinion being offered. Where, as here, the examination reveals that the opinion is based on speculation, conjecture or other improper matter, the court must exclude it under Evidence Code section 803.

Evidence Code section 801 (section 801) sets a "threshold requirement of reliability" for expert testimony. (*People v. Gardeley* (1996) 14 Cal.4th 605, 618.) Section 801, subdivision (b) limits expert testimony "to such an opinion as is: [¶] . . . [¶] [b]ased on matter . . . whether or not admissible, *that is of a type that reasonably may be relied upon by an expert in forming an opinion upon the subject to which his testimony relates* . . . ." (Emphasis added.) Upon objection, a trial court is statutorily required to "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." (Evid. Code, § 803; accord, *Young v. Bates Valve Bag Corp.* (1942) 52 Cal.App.2d 86, 96 ["where an expert witness bases his opinion entirely upon incompetent matter, or where

it is shown that such incompetent matter is the chief element upon which the opinion is predicated, such opinion should be rejected altogether"]; Miguel Mendez, California Law Revision Commission Background Study – Expert Testimony and the Opinion Rule: Comparison of Evidence Code with the Federal Rules (July 2002) p. 8 [hereafter Cal. Law. Revision Com. Background Study] ["The inadmissibility of expert opinions based on improper matter [under section 801] is reinforced in California by another rule [Evidence Code section 803]. On its own motion or upon objection, a court is required to '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'"].) "The foundational requirements governing expert testimony" in both sections 801 and 803 were "reasonably and rationally formulated to ensure the *relevancy* of such evidence." (*People v. Ramos* (1997) 15 Cal.4th 1133, 1176, emphasis added.)

Evidence Code sections 801 and 803, which were codified with the rest of the modern Evidence Code in 1965, consolidated and restated existing case law concerning the admission of expert testimony. (Recommendation Proposing an Evidence Code (Jan. 1965) Cal. Law Revision Com. Rep. (1965) p. 17; see also *Arellano v. Moreno* (1973) 33 Cal.App.3d 877, 884 ["[t]he commission's comment to subdivision (b) of section 801 indicates clearly that the subdivision represents a codification of decisional law"].) Section 801(b) in particular was designed to "retain[ ] in large measure [] existing California law" by "provid[ing] a sensible standard of admissibility while, at the same time, [] continu[ing] in effect the discretionary power of the courts to regulate abuses." (Cal. Law Revision Com. com., 29B pt. 3 West's Ann. Evid. Code (1995 ed.) foll. § 801, p. 21.)[12/] Its purpose was to "assure[] the reliability and

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12/ Prior to enactment of the Evidence Code, courts routinely engaged in (continued...)

trustworthiness of the information used by experts in forming their opinions." (*Ibid.*)

Because "the subjects upon which expert opinion may be received" are so numerous, the Legislature expressly left to the courts the task of interpreting the "reasonably reliable" foundational standard set forth in Evidence Code section 801. (Cal. Law Revision Com. com., 29B pt. 3 West's Ann. Evid. Code, *supra*, foll. § 801, at p. 20; see also *Pacific Gas & Electric Co. v. Zuckerman* (1987) 189 Cal.App.3d 1113, 1134 ["'[w]hat are reliable matters [for an expert opinion] depends on the particular subject . . . . The Evidence Code prescribes minimum requisites for all cases, leaving particular rules to

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12/ (...continued)
a searching threshold analysis of the foundation for expert testimony. (See, e.g., *Roscoe Moss Co. v. Jenkins* (1942) 55 Cal.App.2d 369, 380 [rejecting expert testimony about how much water the well at issue would have produced because it was founded on a comparison with the amount produced by another well and "[n]o sufficient foundation was laid for a comparison of the two wells"]; *Estate of Powers* (1947) 81 Cal.App.2d 480, 485-486 [affirming trial court's judgment notwithstanding the verdict in part because the opinion testimony given by two medical doctors concerning the mental capacity of the testatrix was based entirely on an incomplete reading of hospital records – "they did not accept the hospital records in toto as the basis for their expressed opinions, but rather accepted only those portions of the hospital records which supported their opinions and rejected those portions which contradicted their opinions"(emphasis omitted)]; *Eisenmayer v. Leonardt* (1906) 148 Cal. 596, 600-601 [affirming judgment for the defendants: plaintiffs' expert testimony concerning the asserted value of stock for a company that was never formed was inadmissible because "[t]here were no facts stated – either real or hypothetical – as a basis for an intelligent opinion"]; *People v. Luis* (1910) 158 Cal. 185, 194-195, overruled on another ground in *Correa v. Superior Court* (2002) 27 Cal.4th 444 [affirming exclusion of expert testimony by a medical doctor that, based on the defendant's appearance alone, she could determine his mental state and level of intellect, reasoning that "the trial court was amply warranted in concluding that the witness had not been shown to have had sufficient opportunity to acquire such knowledge concerning the defendant's mind as would qualify her to answer the question"].)

be formulated . . . by judicial decisions'"].)

California courts have determined that the "reasonably relied upon" inquiry encompasses an examination of whether there is a logical nexus between the particular opinion being offered and the purported foundation for that opinion. (See, e.g., *Pacific Gas & Electric Co. v. Zuckerman*, *supra*, 189 Cal.App.3d at p. 1134 ["Courts, both trial and appellate, have the responsibility of insuring that an expert's determination of value takes into account only reasonable and credible factors"]; *Id.* at p. 1136 [criticizing trial court for accepting expert's "conclusion[s] without any critical assessment of the reasoning employed and the assumptions relied upon," and reversing and remanding for a new trial] ; *Westrec Marina Management, Inc. v. Jardine Ins. Brokers Orange County, Inc.* (2000) 85 Cal.App.4th 1042, 1051 [trial court did not abuse its discretion in excluding expert testimony on anticipated profits where expert failed to use "'reliable statistical information'" and "'data to analyze [the] market'"]; *City of San Diego v. Sobke* (1998) 65 Cal.App.4th 379, 395 [trial court did not abuse its discretion in excluding expert testimony on valuation of goodwill, where testimony "was founded upon matter insufficient to form a proper basis for such opinion"]; *Kotla v. Regents of University of California* (2004) 115 Cal.App.4th 283, 291, 293 [trial court erred in admitting testimony of human resources expert as to whether an employer had a retaliatory motive in firing an employee: expert opinion "lacked any reliable foundation" in the expert's professional experience or expertise because "no foundation was established at trial that [the doctor] had so frequently observed employers exploiting information about computer misuse uncovered during employee depositions as pretexts for retaliation that he could confidently apply the same explanation to this case"].)

On the most basic level, such an analysis may include, as plaintiffs here argue, a determination whether the categories of material an expert relies on

are generally of the type an expert in that field would use. (See *Luque v. McLean* (1972) 8 Cal.3d 136, 148 [affirming trial court's exclusion of expert testimony in a product liability case that was founded on "articles from Reader's Digest, Today's Health and Consumer Bulletin . . . because none of those periodicals constitute the type of professional technical literature 'that reasonably may be relied upon by an expert in forming an opinion'"]; *People v. Stoll* (1989) 49 Cal.3d 1136, 1154 [upholding admission of expert testimony concerning defendant's inclination toward sexual deviance that was based, in part, on standardized written personality tests and patient interviews, which is the type of material "professionals routinely use . . . as a basis for assessing personality, and drawing behavioral conclusions therefrom"].)

Plaintiffs argue that the trial court inquiry under section 801 can go no further. (See OBOM, pp. 22-23.) In plaintiffs' view, expert medical causation testimony is admissible so long as it is based on a category of material a medical expert would typically or generally rely on (e.g., an epidemiology study), rather than a category of material a medical expert would never use to assess causation (e.g., an article from a popular magazine or a comic book). (See OBOM, p. 25; see also OBOM, pp. 10-11.) Under plaintiffs' proposed standard, the trial court cannot ensure the reliability of an expert's opinion by looking at the content of the materials relied upon to determine whether there is a logical connection between those materials and the opinion being offered. (See OBOM, p. 16.) Rather, plaintiffs contend that at most, the court may examine only the categories in which the materials fall, without regard to whether these materials provide any support for the opinion being offered. (See OBOM, pp. 24-25, 28.) Thus, under plaintiffs' standard, a trial court would be obligated to admit expert testimony where the expert relies on an appropriate category of scientific study, even if the study reaches *the precise*

opposite conclusion from that reached by the expert.[13/]

Rather than permit such an absurd result, courts have recognized that a trial court's examination of the foundation for expert testimony reaches beyond an initial inquiry into the categories of material upon which an expert relies.

After all, the scope of a trial court's inquiry into the reliability of expert testimony is, necessarily, a relative one which depends on the particular opinion being offered. (See *People v. Bledsoe* (1984) 36 Cal.3d 236, 246 ["Clearly, the admissibility of expert testimony on a given subject must turn both on the nature of the particular evidence and its relation to a question actually at issue in the case"]; *People v. Ramos*, *supra*, 15 Cal.4th at p. 1176;

13/ Plaintiffs also contend that allowing a trial court to conduct a more searching review of the foundational reliability of expert testimony under section 801 would conflict with the test for expert testimony based on novel scientific techniques or procedures under *People v. Kelly* (1976) 17 Cal.3d 24. (OBOM, pp. 29-30.) Not so.

Kelly constitutes "a specialized application of the reasonable reliance test prescribed by the [Evidence] Code" for scientific techniques of particularly questionable reliability – those which are new and untested. (Cal. Law Revision Com. Background Study, *supra*, at p. 13; *id.* ["over objection, expert opinion is inadmissible in California unless it is based on matter that is of a type reasonably relied upon by experts in the field. Clearly, expert opinion based on novel scientific [methods] or techniques rejected by the pertinent scientific community fails that test"]; see also *People v. Stoll*, *supra*, 49 Cal.3d at p. 1165 (dis. opn. of Lucas, C.J.) ["The *Kelly/Frye* test is merely an application of the 'reasonable reliability' standard to purported 'scientific' methods"].) Thus, even under *Kelly*, trial courts are called upon to examine the "fit" between the novel scientific technique used by an expert and the opinion being offered. (See *People v. Venegas* (1998) 18 Cal.4th 47, 81 [proponent of expert testimony based on novel scientific procedure must demonstrate, in addition to general acceptance of the technique in the relevant scientific community, that the expert used proper procedures in applying the technique to the facts of the particular case].)

see also *id.* at p. 1175 [acknowledging that the parallel inquiry concerning an expert witness' competency to provide a particular opinion also is "a relative one, i.e., relative to the topic about which the person is asked to make his statement"].) As the Court of Appeal explained in the earlier *Lockheed Litigation Cases* opinion:

> An expert opinion has no value if its basis is unsound. [Citations.] Matter that provides a reasonable basis for one opinion does not necessarily provide a reasonable basis for another opinion. Evidence Code section 801, subdivision (b), states that a court must determine whether the matter that the expert relies on is of a type that an expert reasonably can rely on "in forming an opinion *upon the subject to which his testimony relates*." We construe this to mean that the matter relied on must provide a reasonable basis for the particular opinion offered, and that an expert opinion based on speculation or conjecture is inadmissible. [Citations.]

(*Lockheed Litigation Cases*, *supra*, 115 Cal.App.4th at p. 564.)

Thus, contrary to the plaintiffs' claim here, the trial court's analysis of the reliability of expert testimony may include an assessment of the reliability of the data and conclusions contained in the foundational material itself. (See *People v. Boyette* (2002) 29 Cal.4th 381, 449 ["Of course, any material that forms the basis of an expert's opinion testimony must be reliable"]; *People ex rel. Lockyer v. R.J. Reynolds Tobacco Co.* (2004) 116 Cal.App.4th 1253, 1277 [after analyzing the general methods and particular procedures employed by a media research survey, appellate court concludes that trial court did not err in allowing expert testimony to be based on survey data]; 1 Witkin, California Evidence (4th ed. 2000) Opinion Evidence, § 31, p. 561 ["[w]hen the opinion is not based on matter perceived by or personally known to the witness, but

depends on information furnished by others, the opinion will be of little value unless the source is reliable"]; see also *Place v. Workmen's Comp. App. Bd.* (1970) 3 Cal.3d 372, 378 [expert opinion cannot constitute substantial evidence if it "does not rest upon relevant facts;" worker's compensation board therefore cannot rely on expert medical reports "which it knows to be erroneous," "which are no longer germane," or which are "based upon inadequate medical history or examinations"].)

A trial court inquiry under Evidence Code section 801 also requires an analysis of the "fit" between the foundational material and the particular opinion an expert offers to determine whether the opinion is in fact supported and not speculative. (See *People v. Stoll, supra*, 49 Cal.3d at pp. 1154-1155, fn.19 [acknowledging that expert's reliance on psychiatric tests may still be "professionally 'unreasonable,'" even where the tests are of the general variety on which psychiatrists rely, if the administration of those tests to this particular defendant violated "'accepted medical procedures'"]; *In re Marriage of Hewitson* (1983) 142 Cal.App.3d 874, 886 [rejecting expert testimony estimating the value of a closely held corporation because it was founded on a comparison with the stock value of publicly traded corporations, which are not sufficiently comparable types of companies]; *Solis v. Southern Cal. Rapid Transit Dist.* (1980) 105 Cal.App.3d 382, 388-390 [rejecting accident reconstruction expert's testimony because it was founded on, inter alia, experiments which the record did not show were done under conditions similar to those in existence at the time of the accident]; *Korsak v. Atlas Hotels, Inc.* (1992) 2 Cal.App.4th 1516, 1524; *Smith v. ACandS, Inc.* (1994) 31 Cal.App.4th 77, 93, disapproved of on another ground in *Camargo v. Tjaarda Dairy* (2001) 25 Cal.4th 1235, 1245; *Bay Area Rapid Transit Dist. v. Superior Court* (1996) 46 Cal.App.4th 476, 482; see also *Southern Pacific Transportation Co. v. Santa Fe Pacific Pipelines, Inc.* (1999) 74 Cal.App.4th

1232, 1247-1248 [relying on Evidence Code section 803 to reverse judgment for a new trial: although the easement valuation method used by plaintiff's expert "in general would not constitute an improper basis for an opinion," the trial court "never applied section 803 to delve into the bona fides of the railroad's valuation reports," which "would have led to identifying proper and/or improper bases for the railroad's opinion"].)

Fundamental to these decisions is the recognition that "[i]f the [trial] judge is to avoid ruling on an essentially arbitrary basis, the judge must be able to go beyond the face of the testimony describing the research data and findings."[14/] (Imwinkelried, *Trial Judges—Gatekeepers or Usurpers? Can the Trial Judge Critically Assess the Admissibility of Expert Testimony without Invading the Jury's Province to Evaluate the Credibility and Weight of the Testimony?* (2000) 84 Marq. L.Rev. 1, 35-36 (footnotes omitted).) Indeed, a trial court would be greatly hampered in its statutory task of ensuring the

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14/ In order to allow the court to fully assess the reliability of an expert's testimony, the expert must provide the court with the bases for his or her opinion, and offer more than bare conclusions. (See *Kelley v Trunk* (1998) 66 Cal.App.4th 519, 524 [expert declaration not admissible "because it did not disclose the matter relied on in forming the opinion expressed. The required foundational showing that the opinion rests on matters of a type experts reasonably rely on is not made where, as here, the expert does not disclose what he relied on in forming his opinion"]; *Id.* at 525 [statutory standard for summary judgment not met by "laconic expert declarations which provide only an ultimate opinion, unsupported by reasoned explanation"]; *McGonnell v. Kaiser Gypsum Co.* (2002) 98 Cal.App.4th 1098, 1106 ["Plaintiffs cannot manufacture a triable issue of fact through use of an expert opinion with self-serving conclusions devoid of any basis, explanation or reasoning"].) In other words, an expert cannot state an opinion "supported only by a statement [saying] (in essence), 'Trust me, I'm an expert, and it makes sense to me.'" (*Jennings v Palomar Pomerado Health Systems, Inc.* (2003) 114 Cal.App.4th 1108, 1120, fn.12; see also Kennedy & Martin, *California Expert Witness Guide* (2d ed. 2005) § 4.1, p. 52 ["[a]n expert may base an opinion only on *reliable* information; merely relying on information does not make it reliable"].)

reliability and trustworthiness of expert testimony if it were not able to fully examine the underpinnings of that testimony and their connection to the opinion being offered. (See Mendez, *Expert Testimony and the Opinion Rule: Conforming the Evidence Code to the Federal Rules* (2003) 37 U.S.F. L.Rev. 411, 427 (hereafter Conforming the Evidence Code) [Evidence Code section 801 "requires judges to exclude expert opinion unless based on matter 'that is of the type that reasonably may be relied upon' by experts in the field. . . . [T]his command calls for the exclusion of expert opinion whenever based on matter that is inappropriate because of the failure to abide by the protocols or methodologies experts in the field would observe"].)

The conclusion that a trial judge must be able to fully examine the reliability of the foundation for expert testimony also gives effect to the basic principle that "[t]he value of opinion evidence rests not in the conclusion reached but in the factors considered and the reasoning employed," and that "[w]here an expert bases his conclusion upon assumptions which are not supported by the record, upon matters which are not reasonably relied upon by other experts, or upon factors which are speculative, remote or conjectural, then his conclusion has no evidentiary value" and is therefore properly excluded from evidence.[15/] (*Pacific Gas & Electric Co. v. Zuckerman*, *supra*,

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15/ In ruling on the admissibility of an expert's opinion, courts have used the factors of necessity, reliability and speculation or conjecture as guideposts in their analysis. "If, for example, an expert is using hearsay to support his opinion, it should be considered an improper matter unless the elements of necessity and indications of reliability are present. If there is no necessity for the use of hearsay and there is little indication of trustworthiness, a finding against reasonable reliance by an expert is justified." (*Korsak v. Atlas Hotels, Inc.*, *supra*, 2 Cal.App.4th at p. 1524; see also *Luque v. McLean*, *supra*, 8 Cal.3d at pp. 148-149 [suggesting that, if plaintiff's expert were to seek to rely on a booklet concerning accidental injuries from lawn mowers on retrial in a product liability case, the trial court may consider both the necessity and reliability of that material, "considering on the one hand the fact that surveys
(continued...)

189 Cal.App.3d at p. 1135, citing *Hyatt v. Sierra Boat Co.* (1978) 79 Cal.App.3d 325, 338-339 [upholding trial court exclusion of expert testimony founded on speculative and conjectural assumptions about the facts] and *Richard v. Scott* (1978) 79 Cal.App.3d 57, 63 [upholding new trial order founded on trial court's improper admission of speculative expert testimony that was based on factual assumptions unsupported by the evidence]; *Tilem v. City of Los Angeles* (1983) 142 Cal.App.3d 694, 707 ["It is well settled that conjectural and speculative matters may not 'be relied upon by an expert in forming an opinion upon the subject to which his testimony relates, ...' (Evid. Code, § 801, subd. (b).) The reason for such a rule is obvious. Speculative opinions are inherently unreliable and have little, if any, tendency in reason to prove a disputed fact"]; *Bushling v. Fremont Medical Center* (2004) 117 Cal.App.4th 493, 510 [An "expert opinion may not be based on assumptions of fact that are without evidentiary support or based on factors that are speculative or conjectural, for then the opinion has no evidentiary value and does not assist the trier of fact"]; see also *Lockheed Martin Corp. v. Superior Court* (2003) 29 Cal.4th 1096, 1110 [expert opinion cannot rest upon "'guess, surmise or conjecture'"]; 1 Jefferson's California Evidence Benchbook (3d ed. 2005) § 29.40, p. 623 ["[i]t is improper to use conjectural and speculative matters to support an expert's opinion on any subject because they render the opinion unreliable and irrelevant"].) In other words, an expert opinion "'is worth no more than the reasons upon which it is based.'" (*Paxton v. County of Alameda* (1953) 119 Cal.App.2d 393, 406, quoting *Long Beach City H. S. Dist. v. Stewart* (1947) 30 Cal.2d 763, 773; accord, *People v. Gardeley, supra*, 14 Cal.4th at p. 618, citing *Kennemur v. State of California*

15/ (...continued)
conducted by others are generally considered too unreliable for introduction, but, on the other hand, that statistics gathered by others often constitute a great portion of the facts upon which experts in many fields must rely"].)

(1982) 133 Cal.App.3d 907, 923 ["'Like a house built on sand, the expert's opinion is no better than the facts on which it is based'"]; *People v. Bassett* (1968) 69 Cal.2d 122, 141 ['"Expert evidence is really an argument of an expert to the court, and is valuable only in regard to the proof of the facts and the validity of the reasons advanced for the conclusions"']; *Kelley v. Trunk*, *supra*, 66 Cal.App.4th at p. 523 ["An expert's opinion, even if uncontradicted, may be rejected if the reasons given for it are unsound"].)

Indeed, where an expert bases conclusions on factors that are speculative, remote or conjectural, that opinion does not constitute substantial evidence sufficient to support a judgment. (*Lockheed Martin Corp. v. Superior Court*, *supra*, 29 Cal.4th at p. 1110 [noting "our settled understanding that '[a]n expert's opinion which rests upon guess, surmise or conjecture, rather than relevant, probative facts, cannot constitute substantial evidence"]; *Saelzler v. Advanced Group* 400 (2001) 25 Cal.4th 763, 776-777 [plaintiff could not establish that "'more probabl[y] than not'" additional security precautions would have prevented her attack through "the speculative opinion" of her expert; "'proof of causation cannot be based on . . . an expert's opinion based on inferences, speculation and conjecture"]; *Pacific Gas & Electric Co. v. Zuckerman*, *supra*, 189 Cal.App.3d at p. 1135; *Toscano v. Greene Music* (2004) 124 Cal.App.4th 685, 696 ["An expert's opinion must not be based upon speculative or conjectural data. If the expert's opinion is not based upon facts otherwise proved or assumes facts contrary to the only proof, it cannot rise to the dignity of substantial evidence"]; accord, *Leslie G. v. Perry & Associates* (1996) 43 Cal.App.4th 472, 488; *Roddenberry v. Roddenberry* (1996) 44 Cal.App.4th 634, 651; *Lupash v. City of Seal Beach* (1999) 75 Cal.App.4th 1428, 1438 & fn.6; see also *People v. Wharton* (1991) 53 Cal.3d 522, 604 [a judgment must be based on substantial evidence, defined as evidence that "reasonably inspires confidence" and is of "solid

value" – not mere speculation (dis. opn. of Mosk, J.) (internal quotations omitted)].)

B. Dr. Teitelbaum's general causation testimony was properly excluded because none of the materials he relied on actually supported his opinions.

Consistent with the principles outlined in Part I.A., the trial court properly determined that none of the materials that Dr. Teitelbaum relied upon provided a foundation for Dr. Teitelbaum's opinions. Rather, his opinions were speculative and conjectural.

The epidemiology studies Dr. Teitelbaum relied upon did not show that the five chemicals at issue in this case increased the risk of the adverse health effects plaintiffs allegedly experienced. (See typed opn., pp. 16-17.) Instead, the studies established only that individuals exposed to a complex mixture of organic solvents (*in some cases, not even including the five chemicals at issue here*) experienced an increased risk of various adverse health effects. (See pp. 12-13 & fn. 8, *ante*.) The studies did not show that the specific chemicals at issue were responsible for this increased risk.[16/] In short, the studies did not provide a reliable foundation for Dr. Teitelbaum's causation opinion because they had no relevance to the causation issues in this case.[17/]

16/ Nor did Dr. Teitelbaum establish that the chemicals in these mixtures all pose the same risks of harm. (See generally OBOM, p. 11.) To the contrary, as Dr. Teitelbaum himself noted, chemicals (even if they are structurally similar) may have "radically different toxicities." (25 AA 6044-6045.)

17/ Plaintiffs urge that an article from a symposium workshop supports Dr. Teitelbaum's general causation opinion as to toluene. (OBOM, pp. 42-43.) Not so. To the contrary, the symposium article noted that "the present data (continued...)

The animal studies on which Dr. Teitelbaum relied also supplied no basis for his opinion in this case. These studies (a) failed to show that any of the specific chemicals at issue here were responsible for the plaintiffs' adverse health effects, (b) studied diseases that plaintiffs did not have, and (c) could not be reliably extrapolated to humans. (See typed opn., pp. 24-25.) Even though the court gave Dr. Teitelbaum several opportunities to do so in this case (see pp. 10-11, *ante*), Dr. Teitelbaum did not explain how, despite differences between the animal studies relied on and the circumstances of the plaintiffs' exposure, the animal studies nonetheless could be used to support an opinion about the ability of the five chemicals at issue to cause harm in humans generally.[18/] As a result, Dr. Teitelbaum's testimony was speculative

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17/ (...continued)
available on exposure in industry are not adequate for current needs in investigating possible neurobehavioral effects [in humans] because of the limited nature and poor profiling of exposures. . . and lack of detail on mixed exposures and confounding factors." (11 AA 2241, 19 AA 4326.) Moreover, the pages plaintiffs cite from the article contain comments about possible short-term, acute effects of toluene, not long-term, chronic injuries like the ones plaintiffs allege here. (See 19 AA 4334, 4352.)

18/ Dr. Teitelbaum's inability to do so distinguishes this case significantly from *Roberti v. Andy's Termite & Pest Control, Inc.* (2003) 113 Cal.App.4th 893 (*Roberti*), in which the experts did provide an explanation of how the animal studies they relied on could be applied to humans. Unlike the experts in *Roberti*, Dr. Teitelbaum provided no explanation of how the animal studies he relied on could be used to support his opinion about the ability of the chemicals at issue to cause similar harm in humans. (See generally *id.* at p. 898.) Plaintiffs had every opportunity – prior to, during, and subsequent to the Evidence Code section 402 hearing – to provide other studies that would support their expert's causation opinion or an additional explanation of how the animal studies Dr. Teitelbaum relied on could be extrapolated to support his causation opinions in this case, but they produced nothing.

and unreliable.

The case reports on which Dr. Teitelbaum relied did not support his opinion about general causation either. Case reports are anecdotal observations of symptoms in a single patient or a small group of patients. Case report authors may comment on an apparent temporal relationship between exposure to a chemical and the onset of apparent adverse health effects in an individual. Case reports do not, however, isolate or exclude potential alternative causes, investigate or explain the mechanism of causation, or draw conclusions about a chemical's ability to cause a particular adverse health effect in humans generally. (See generally typed opn., pp. 25-26.) They therefore constitute an equally speculative and unreliable basis for Dr. Teitelbaum's general causation opinion.

Finally, Dr. Teitelbaum relied on treatises and registries of toxic effects. But many of the treatises and registries concluded there was only a *possible* association between the chemicals and diseases at issue. Others referred solely to the chemicals' acute effects from short-term exposures, which were not at issue. Still others failed to distinguish between acute effects and chronic effects from long-term exposures (only the latter of which were at issue here). The treatises and toxic registries relied on by Dr. Teitelbaum therefore were irrelevant to and did not support his causation opinions because they either did not say anything about the ability of the chemicals at issue to cause the type of chronic injuries plaintiffs claim or did not support a conclusion that a causal link between the chemicals and diseases at issue exists. (See, e.g., 11 AA 2175-2177, 2178-2180, 2326-2346; 12 AA 2641-2645; 22 AA 5099-5147; 23 AA 5314-5379; 25 AA 5869-5914, 5957-6030, 6152-6159; 26 AA 6160-6224; 27 AA 6492-6558; 28 AA 6725-6737; 29 AA 7178-7186; 30 AA 7187-7274; see also 36 AA 8663-8666, 8673-8726; 14 RT 366-369.) As a result, these documents could not support Dr. Teitelbaum's opinion that

the chemicals at issue were capable of causing the chronic, long-term effects allegedly suffered by the plaintiffs here. (See typed opn., pp. 26-27.)[19/]

The trial court gave plaintiffs several opportunities to supplement the foundation for Dr. Teitelbaum's testimony, but plaintiffs declined. When the trial court responded by excluding Dr. Teitelbaum's testimony, plaintiffs asked the court to dismiss their claims so they would not have to face a summary judgment motion by the defendants. (20 RT 540.) Nonetheless, plaintiffs contend that they should have been afforded the protections associated with a summary judgment procedure and that the Court of Appeal erred in concluding that they waived or invited error with regard to the use of such a procedure. (See OBOM, p. 36, fn. 19.) But it was plaintiffs who asked the trial court to dismiss the action rather than require them to oppose a summary judgment motion. (20 RT 537-540.) They are therefore estopped from complaining on appeal that a summary judgment procedure should have been used instead. (See *Koo v. Rubio's Restaurants, Inc.* (2003) 109 Cal.App.4th 719, 735 ["'Judicial estoppel precludes a party from gaining an advantage by taking one position, and then seeking a second advantage by taking an incompatible position'" (fn. omitted)]; *Jackson v. County of Los Angeles* (1997) 60 Cal.App.4th 171, 183; *Aguilar v. Lerner* (2004) 32 Cal.4th 974, 986.)

The resulting judgment was properly affirmed. The general causation opinions of plaintiffs' expert, Dr. Teitelbaum, lacked foundation because the materials he relied on were irrelevant to and failed to support his conclusions.

19/ Plaintiffs contend that the trial court also should have analyzed these separate categories of material in combination to determine whether Dr. Teitelbaum's testimony had a proper foundation. (See OBOM, pp. 39-41.) But such an analysis changes nothing. Where, as here, each component on which an expert bases his opinion is fundamentally flawed, the sum of the components necessarily is also flawed.

C. The reasoning and holding in *Roberti* do not require a different result.

Plaintiffs argue that *Roberti*, *supra*, 113 Cal.App.4th 893, merits adoption of a narrower interpretation of trial court authority under section 801. (OBOM, pp. 47-49.) The decision in *Roberti* is largely irrelevant to the issues before the court in this case. Moreover, to the extent the decision is relevant, it conflicts with the Evidence Code and other case law and should be disapproved.

Michael Roberti claimed that his autism was caused by exposure to a pesticide applied in the cellar of the Roberti home. The trial court excluded plaintiffs' expert testimony on causation at the motion in limine stage on two separate and independent grounds. First, the court determined that the experts' causation opinions, which were based on animal studies, failed the *People v. Kelly*, *supra*, 17 Cal.3d 24 "general acceptance" admissibility test because they relied on a novel application of animal studies to humans with no explanation of how or why such extrapolation was appropriate in this case given the differences between animals and humans and the lack of confirmatory epidemiology studies. Second, the court concluded that the experts' causation opinions were, for similar reasons, speculative.

The Court of Appeal reversed. First, the court rejected application of the *Kelly* test to cases involving expert medical testimony, as opposed to novel devices or processes. (*Roberti*, *supra*, 113 Cal.App.4th at pp. 899-904.) Second, the court determined that "a more extensive preliminary admissibility test" of the foundation for the experts' causation opinions was inappropriate under section 801. (*Id.* at pp. 904-906.) The court dismissed this test as a "*Daubert*-style analysis" which applies only in federal courts. (*Id.* at pp. 905-906.)

The *Kelly* analysis was not used by the trial court in this case, and no party has ever argued that it should apply here. To the extent *Roberti* discusses the application of *Kelly*, it is irrelevant.

To the extent the *Roberti* opinion understates the proper scope and vigor of a trial court's inquiry into the admissibility of expert testimony under Evidence Code sections 801 and 803, it should be disapproved by this court.

The increased use of expert testimony, and the corresponding increase in complexity of the scientific studies on which experts rely, heighten the need for trial courts to examine that testimony and limit parties to presenting to a jury only those expert opinions that have a proper foundation. The Court of Appeal's analysis in *Roberti* stands alone among modern cases in failing to recognize the proper screening role for the trial court. In contrast, the Court of Appeal's analysis of a trial court's responsibility under Evidence Code section 801 in this case ensures that trial courts have full statutory authority to assess the adequacy of the foundation for an expert's opinion and the reliability of an expert's testimony. This court should apply the same standard applied by the Court of Appeal in this case as well as the prior Lockheed Litigation Cases Group 6B appeal – a standard which has also been adopted by the majority of appellate courts to recently consider the issue. (*Lockheed Litigation Cases*, *supra*, 115 Cal.App.4th at pp. 563-564; see also *People v. Mitchell* (2003) 110 Cal.App.4th 772, 783-784, 793-794; *Jennings v. Palomar Pomerado Health Systems, Inc.*, *supra*, 114 Cal.App.4th at pp. 1116-1118; *Bushling v. Fremont Medical Center*, *supra*, 117 Cal.App.4th at p. 510.)

II.

THE TRIAL COURT'S POWER TO DETERMINE THE RELIABILITY OF THE BASES FOR EXPERT TESTIMONY DOES NOT INVADE THE PROVINCE OF THE JURY.

A. The Evidence Code expressly assigns to the trial judge the task of determining the admissibility of expert testimony, including any associated factfinding.

The issue of the foundational reliability of expert testimony is not, as the plaintiffs suggest (see OBOM, pp. 35-37), a jury question.

"It is the duty of the trial judge to rule on objections to the introduction of evidence and to exclude incompetent and immaterial evidence. What evidence falls within those classifications is a question of law to be decided by the trial judge" which "should not be passed on to the jury for decision." (*McNamara v. Emmons* (1939) 36 Cal.App.2d 199, 206.) As this Court has recognized, there may be some factfinding required in connection with determining the admissibility of evidence and this, too, is the province of the trial judge. (*Jehl v. Southern Pac. Co.* (1967) 66 Cal.2d 821, 830 ["*Decisions by the court admitting or excluding evidence at trial involve factual determinations* as do those pertaining to the court's jurisdiction, the sufficiency of pleadings, and the interpretation of documents" (emphasis added)].)

These principles are codified in the Evidence Code, which provides that the threshold question of the reliability of the foundation for an expert opinion is solely the province of the court.

First, Evidence Code section 310 provides that all questions of law, including the admissibility of evidence, are to be decided by the court, and that determinations of fact preliminary to the admission of evidence are also to be

decided by the court, in accordance with Evidence Code section 400 et seq.

Evidence Code section 400 in turn provides that a "preliminary fact" is "a fact upon the existence or nonexistence of which depends the admissibility or inadmissibility of evidence. The phrase 'the admissibility or inadmissibility of evidence' includes the qualification or disqualification of a person to be a witness and the existence or nonexistence of a privilege."

Evidence Code section 402 provides that "when the existence of a preliminary fact is disputed, its existence or nonexistence shall be determined" at a hearing under Evidence Code sections 403, 404 and 405. It is Evidence Code section 405 that applies to preliminary fact questions about the admissibility of expert testimony.[20/] As the Assembly Judiciary Committee explained when enacting the Evidence Code, "[s]ection 405 requires the judge to determine the existence or nonexistence of disputed preliminary facts .... Section 405 deals with evidentiary rules designed to withhold evidence from the jury because *it is too unreliable to be evaluated properly* or because public policy requires its exclusion." (Assembly Com. on Judiciary Com., 29B West's Ann. Evid. Code (1995 ed.) foll. § 405, p. 374, emphasis added.) The Judiciary Committee cited the qualification of an expert witness as an example of a preliminary fact to be determined under section 405. (*Ibid.*)

Like the decision on the qualifications of an expert, the determination of the reliability of the foundation of an expert's opinion is a question California trial courts routinely resolve under section 405, as decisions applying this court's *Kelly* jurisprudence make clear. (See *People v. King* (1968) 266 Cal.App.2d 437, 443 ["The determination of whether a scientific

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20/ Plaintiffs cite Assembly Committee comments to Evidence Code section 403 to support their claim that a trial judge cannot decide preliminary facts associated with the admissibility of evidence. (See OBOM, pp. 45-46.) As explained below, section 405 – and not section 403 – applies where the admissibility and reliability of expert testimony is disputed.

test has received general acceptance by recognized experts in the field so as to justify the admission of expert testimony based on the results of the test is primarily a question of fact for the trial court"]; see also Cal. Law Revision Com. Background Study, *supra*, at p. 11.) The many other appellate decisions that have upheld a trial court's determination to preclude a jury from hearing unreliable expert testimony further confirm that section 405 is the proper statute under which these determinations are to be made. (See pp. 22, 25-28, *ante*.) After all, if Evidence Code section 403 applied to these determinations instead, jurors would be allowed to second-guess trial court decisions made during *Kelly* hearings to exclude evidence of unreliable novel scientific techniques as well as decisions to exclude otherwise unreliable expert testimony.

Commentators agree that Evidence Code section 405 authorizes trial judges to engage in fact-finding to determine the admissibility of an expert's opinion under section 801. In a report on the Evidence Code to the California Law Revision Commission, Professor Miguel Mendez explained that "whether the expert's opinion is based on matters of a type reasonably relied upon by experts in the field [i.e., the criteria of section 801] or on scientific principles and techniques generally accepted by the pertinent scientific community [i.e., the criteria for the *Kelly* test] are questions to be decided by the judge under section 405. The proponent must convince the judge by a preponderance of the evidence that expert evidence meets these tests." (See Conforming the Evidence Code, *supra*, 37 U.S.F. L.Rev. at p. 1015.) Professor Edward Imwinkelried agrees. "California decided to allocate the question [of the sufficiency of the foundation of expert testimony] to the judge under its statute, Evidence Code section 405." (Imwinkelried, Logerquist v. McVey: *The Majority's Flawed Procedural Assumptions* (2001) 33 Ariz. St. L.J. 121, 135 (hereafter Flawed Assumptions).)

Thus, the Evidence Code provides that the admissibility of expert testimony is a question of law that depends upon preliminary facts to be determined by a court, not the jury. Contrary to plaintiffs' assertion (see OBOM, pp. 26, 30), such an analysis does not result in trial court assessment of the plaintiff's evidence. In deciding the admissibility question, the court does not adjudicate the validity of the expert's *conclusions*, such as whether a particular chemical caused plaintiff's injuries. Instead, the court determines only if the *preliminary facts* support the expert's opinion, such as whether the scientific tests the expert used to find a causal link between a chemical and the plaintiff's injury are a reliable basis for the expert's opinion.

As Professor Imwinkelried explained in the context of Federal Rule of Evidence, rule 104(a) (which was modeled on Evidence Code section 405): "the judge does not lump the foundational testimony and the ultimate opinion together and assess the credibility of everything the witness would testify to. . . . The judge inquires only into the sufficiency of the proof of the foundational facts . . . The judge's limited authority is to pass on the sufficiency of the predicate for the opinion, that is, the foundational proof that the expert derived the opinion by using sound scientific methodology." (Flawed Assumptions, *supra*, 33 Ariz. St. L.J. at p. 132; see also *State v. O'Key* (Or. 1995) 899 P.2d 663, 677, fn. 18 ["A trial court [evaluating the reliability of expert testimony] does not sit as a trier of fact to determine which side has presented the more credible (or more persuasive) expert or scientific evidence. Rather, a trial court, in . . . determin[ing] whether (or to what extent) any specific expert or scientific evidence will be admissible at trial, sits only as the trier of *preliminary facts–i.e.,* those facts that must be found, under the governing rules of evidence, *before* a witness is permitted to express an opinion."].)

The trial court did not exceed that authority here. Plaintiffs appear to contend that because the trial court's exclusion of Dr. Teitelbaum's testimony was dispositive, the trial court must have exceeded its statutory authority and engaged in an overly searching review of the merits and substance of plaintiffs' case. (See OBOM, pp. 35-37.) Not so. "As a practical matter every ruling as to evidence affects to a greater or lesser degree the ultimate result of an action. Therefore, the fact that a particular piece of evidence is vital to a party's burden of proof will not alone transform it from a matter of procedure into a matter of substance." (*Showalter v. Western Pacific R.R. Co.* (1940) 16 Cal.2d 460, 464-465.)[21/]

B. The trial court's decision concerning the admissibility of expert testimony does not violate the plaintiffs' right to a jury trial.

Plaintiffs claim that requiring trial courts to undertake a preliminary analysis of the reliability of expert testimony before admitting such testimony into evidence will "dilute" the right to a jury trial under the Seventh Amendment to the United States Constitution and under Article I, Section 16 of the California Constitution. (OBOM, pp. 37, 44.) Plaintiffs are incorrect.

First, the Seventh Amendment does not apply to jury trials in California state courts. (*Jehl v. Southern Pac. Co., supra,* 66 Cal.2d at p. 827; *Rowe v. Superior Court* (1993) 15 Cal.App.4th 1711, 1718-1719, fn.7.)

Second, plaintiffs' claim that the trial court's admissibility decision somehow violates the right to a jury trial under the California Constitution is

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21/ Plaintiffs also suggest that allowing trial judges to decide the admissibility of evidence subject to an "abuse of discretion" standard of review will lead to inconsistent case results. (OBOM, pp. 38-39.) Yet there would be no less inconsistency if questions of admissibility were simply rolled into ultimate fact determinations made by *juries*.

based on a misconception that all fact determinations are the exclusive province of the jury. "Courts often determine fact issues . . . and the acceptance of this practice over many years *refutes the argument that the framers of the Constitution regarded the jury as the only competent finder of facts*." (*Jehl v. Southern Pac. Co.*, *supra*, 66 Cal.2d at p. 830, emphasis added.) Morever, as explained earlier, such factfinding is allocated to the judge under the Evidence Code for purposes of determining the admissibility of evidence. Indeed, a preliminary reliability analysis conducted by the trial court to determine the admissibility of expert witness testimony no more violates the right to a jury trial than does the well-established *Kelly/Frye* hearing to determine the admissibility of expert testimony regarding *novel* scientific evidence. (See Flawed Assumptions, *supra*, at p. 135 ["*Frye* jurisdictions such as California also treat the sufficiency of the foundation [of expert testimony] as an issue for the judge rather than the jury. The existence of that power in those jurisdictions helps explain why trial courts in those states have presided over *Frye* hearings, generating thousands of pages of transcripts."].)

C. The Legislature's decision to separate the admissibility determination from the decision on the merits of the case comports with what recent social science research demonstrates: the value of having different factfinders determine each aspect of a case.

Plaintiffs claim that allowing the trial court to exclude expert testimony that is speculative and conjectural shows a lack of faith in the jury system and in the ability of jurors to evaluate complex scientific material. (See OBOM, pp. 33-35.) Not at all.

The Legislature's judgment that preliminary admissibility determinations should rest with the judge rather than the jury reflects an

understanding that *jurors will be unable to ignore expert evidence that they have found to be unreliable.* (See Assembly Com. on Judiciary Com., 29B West's Ann. Evid. Code, *supra*, foll. § 405, p. 374 ["Section 405 deals with evidentiary rules designed to withhold evidence from the jury because *it is too unreliable to be evaluated properly* or because public policy requires its exclusion" (emphasis added)]; see also *id.* at p. 378 [prior law regarding the admissibility of possibly coerced confessions was "based on the belief that a jury, in determining the defendant's guilt or innocence, can and will refuse to consider a confession that it has determined was involuntary even though it believes that the confession is true. Section 405, on the other hand, proceeds upon the belief that it is unrealistic to expect a jury to perform such a feat"]; Flawed Assumptions, *supra*, 33 Ariz. St. L.J., at pp. 132-133 ["there is a significant risk that the jurors' exposure to the foundational testimony and the proffered evidence will distort their deliberations even when they make a conscious decision that the item of evidence is technically inadmissible"].) The point is *not* that judges are better factfinders than jurors; it is that there needs to be a *separation of the factfinding function* between the factfinder who decides on the admissibility of evidence and the factfinder who decides on the merits of the case.

Indeed, recent research demonstrates that judges *have exactly the same problem as jurors* in being unable to ignore inadmissible evidence. (See Wistrich, et al., *Can Judges Ignore Inadmissible Information? The Difficulty of Deliberately Disregarding* (2005) 153 U.Pa. L.Rev. 1251, 1323 ["Taken together, our studies show that judges do not disregard inadmissible information when making substantive decisions in either civil or criminal cases"].)[22/] "Both jurors and judges are likely to have difficulty disregarding

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22/ In one experiment, for example, judges were given information about (continued...)

inadmissible evidence, but judges presiding in a jury trial can protect juries from encountering inadmissible evidence *in a way that they cannot protect themselves*." (*Id.* at p. 1327, emphasis added). "In short, the exclusionary rules operate best in a *system of divided decision making* in which the judge serves as gatekeeper and the jury serves as fact finder." (*Ibid.*, emphasis added.)

Thus, the key to solving this problem is to separate the admissibility decision from factfinding on the merits:

> Two factors point to the conclusion that as in the case of privilege foundations, [23/] there is a substantial risk that having

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22/ (...continued)
a hypothetical contract dispute. Judges in one group were first asked to review a communication potentially protected by the attorney-client privilege, which contained information revealing that plaintiff's case lacked merit. Judges in the other group (the control group) were asked simply to rule on the contract dispute without reviewing any of the allegedly privileged information. Twenty-five of the forty-five judges in the control group (i.e., 55.6%) found for the plaintiff. (*Wistrich*, *supra*, 153 U.Pa. L.Rev. at p. 1296.) In contrast, the judges who reviewed the allegedly privileged information "were less hospitable to the plaintiff's claim. Among those who ruled that the audiotape was privileged, only 29.2% (7 out of 24) found for the plaintiff." (*Ibid.*)

23/ Professor Imwinkelried uses the following example from the privilege arena. Imagine that a criminal defendant confesses to his attorney that he committed a crime. At the criminal trial, the prosecution seeks to introduce the confession, the defendant claims the conversation is protected by the attorney-client privilege, and there is a question whether privilege was waived because of the presence of a third party. The Evidence Code could have been written so as to allow the jury to hear evidence of the confession but, before using that confession to determine the defendant's guilt, the jury could have been required to determine whether the privilege applied and therefore whether the confession should be excluded. "The rub is that even if the jury finds that no third party was present and the attorney-client conversation was privileged, the cat is out of the bag. At a subconscious level it will be difficult, if not impossible, for the jurors to erase the client's damning confession to the
(continued...)

> been exposed to the expert foundation and the proffered opinion, the exposure will skew the jury's deliberations even if the jurors make a conscious decision that the testimony is inadmissible. First, expert foundations tend to be longer than the run-of-the-mill predicate. In a prosecution involving moving radar, the expert testimony ran for more than 2,000 pages of transcript. In a DNA case, the transcript of the *Frye* hearing consumed more than 5,000 pages. Common sense suggests that if the jury has sat through hours of foundational testimony, the jurors may find it difficult to put the testimony completely out of mind even after a conscious decision that the testimony is inadmissible.
>
> The second factor is that while the jurors view most foundational issues as all-or-nothing propositions, expert foundational testimony tends to be more probabilistic. . . . [¶]
>
> Given those two considerations, it should come as no surprise that the precedents uniformly hold that the sufficiency of an expert foundation is for the judge rather than the jury. Even more importantly, as we have seen, that allocation of the issue to the judge in no way posits the assumption that the judge is better able to assess the reliability of expert testimony than the jurors are.

(Flawed Assumptions, *supra*, 33 Ariz. St. L.J. at pp. 133-135, footnotes omitted.)

23/ (...continued)
attorney from their memories while they deliberated." (Flawed Assumptions, *supra*, 33 Ariz. St. L.J., at p. 133.) For this reason, judges determine the admissibility of evidence that a party claims is privileged, and that determination, based upon factual findings of the court, is not reconsidered by the jury. The same rationale for judicial determination of facts applies in the context of expert testimony.

III.

THE EMERGING CONSENSUS IN SISTER STATES AND AMONG LEADING EVIDENCE SCHOLARS IS THAT TRIAL JUDGES MUST ENSURE THE RELIABILITY OF EXPERT TESTIMONY BEFORE ALLOWING SUCH TESTIMONY TO BE HEARD BY A JURY.

Pre-admissibility testing of the reliability of expert testimony under California's Evidence Code is consistent with the emerging consensus among other states. Thirty-seven of the forty-nine states outside California require trial judges to determine the reliability of expert testimony[24/] before allowing that testimony to be heard by a jury.[25/] Significantly, a majority of those states

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24/ We refer here to expert testimony that does *not* rely on novel scientific methods and is therefore *not* subject to the *Kelly/Frye* test.

25/ Colorado [*People v. Shreck* (Colo. 2001) 22 P.3d 68]; Hawaii [*State v. Vliet* (Hawaii 2001) 19 P.3d 42]; Idaho [*State v. Gleason* (Idaho 1992) 844 P.2d 691, 694]; Indiana [*McGrew v. State* (Ind. 1997) 682 N.E.2d 1289]; Iowa [*Williams v. Hedican* (Iowa 1997) 561 N.W.2d 817]; Maine [*State v. Irving* (Me. 2003) 818 A.2d 204, 207]; Maryland [*Giant Food, Inc. v. Booker* (Md.App. 2003) 831 A.2d 481, 490]; Michigan [see Staff Com. to 2004 Amendment, West's Ann. Mich. R. Evid. (2005 ed.) foll. § 702 ("The new language [of the amended code section] requires trial judges to act as gatekeepers who must exclude unreliable expert testimony"); see also *Nelson v. American Sterilizer Co.* (Mich.App. 1997) 566 N.W.2d 671, 672-673 (imposing reliability test even before legislative amendment to code section)]; Minnesota [*Goeb v. Tharaldson* (Minn. 2000) 615 N.W.2d 800]; Missouri [*State Bd. of Registration for Healing Arts v. McDonagh* (Mo. 2003) 123 S.W.3d 146]; New Jersey [*Kemp ex. rel. Wright v. State* (N.J. 2002) 809 A.2d 77, 86]; New York [*People v. Wesley* (N.Y. 1994) 633 N.E.2d 451; *Parker v. Mobil Oil Corp.* (N.Y.App.Div. 2005) 793 N.Y.S.2d 434]; North Carolina [*Howerton v. Arai Helmet, Ltd.* (N.C. 2004) 597 S.E.2d 674]; North Dakota [*Myer v. Rygg* (N.D. 2001) 630 N.W.2d 62]; Oregon [*State v. Brown* (Or. 1984) 687 P.2d 751]; Rhode Island [*DiPetrillo v. Dow Chemical Co.* (R.I. 1999) 729 A.2d 677, 686]; South Carolina [*State v. Council* (S.C. 1999) 515 S.E.2d 508, 518]; Tennessee [*McDaniel v. CSX Transp., Inc.* (Tenn. 1997) (continued...)

have adopted a reliability test *without* embracing the *Daubert* standard.[26/] In at least five of the remaining 12 states that have not imposed a reliability standard, the issue remains uncertain.[27/] That leaves only seven states that

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25/ (...continued)
955 S.W.2d 257]; Virginia [*John v. Im* (Va. 2002) 559 S.E.2d 694]; Alaska [*State v. Coon* (Alaska 1999) 974 P.2d 386]; Arkansas [*Farm Bureau Mut. Ins. Co. v. Foote* (Ark. 2000) 14 S.W.3d 512]; Connecticut [*State v. Porter* (Conn. 1997) 698 A.2d 739]; Delaware [*M.G. Bancorporation, Inc. v. Le Beau* (Del.Super.Ct. 1999) 737 A.2d 513]; Kentucky [*Mitchell v. Com.* (Ky. 1995) 908 S.W.2d 100, overruled on other grounds in *Fugate v. Com.* (Ky. 1999) 993 S.W.2d 931]; Louisiana [*State v. Foret* (La. 1993) 628 So.2d 1116]; Massachusetts [*Com. v. Lanigan* (Mass. 1994) 641 N.E.2d 1342]; Mississippi [*Mississippi Transp. Com'n v. McLemore* (Miss. 2003) 863 So.2d 31]; Nebraska [*Schafersman v. Agland Coop* (Neb. 2001) 631 N.W.2d 862]; New Hampshire [*Baker Valley Lumber, Inc. v. Ingersoll-Rand Co.* (N.H. 2002) 813 A.2d 409]; New Mexico [*State v. Alberico* (N.M. 1993) 861 P.2d 192]; Ohio [*Miller v. Bike Athletic Co.* (Ohio 1998) 687 N.E.2d 735]; Oklahoma [*Christian v. Gray* (Okla. 2003) 65 P.3d 591]; South Dakota [*State v. Hofer* (S.D. 1994) 512 N.W.2d 482]; Texas [*E.I. du Pont de Nemours & Co. v. Robinson* (Tex. 1995) 923 S.W.2d 549]; Vermont [*USGen New England, Inc. v. Town of Rockingham* (Vt. 2004) 862 A.2d 269]; West Virginia [*Wilt v. Buracker* (W.Va. 1993) 443 S.E.2d 196]; Wyoming [*Bunting v. Jamieson* (Wyo. 1999) 984 P.2d 467].) In addition, Montana applies *Daubert* to determine the admissibility of *novel* scientific testimony, but does not apply a reliability test outside that context. (*State v. Ayers* (Mont. 2003) 68 P.3d 768, 778.)

26/ These nineteen states include: Colorado, Hawaii, Idaho, Indiana, Iowa, Maine, Maryland, Michigan, Missouri, Minnesota, New Jersey, New York, North Carolina, North Dakota, Oregon, Rhode Island, South Carolina, Tennessee and Virginia. (See fn. 25, *ante*.)

27/ Florida [see 1 Ehrhardt, Fla. Prac. (2005 ed.) Evidence, § 702.3] ["The current state of the law is not clear"]; Georgia [see *Home Depot U.S.A., Inc. v. Tvrdeich* (Ga.Ct.App. 2004) 602 S.E.2d 297 (recent Georgia intermediate appellate court case in which the majority and dissenting judges debate whether a 1982 Georgia Supreme Court case requires a reliability analysis)]; Illinois [compare *Donaldson v. Central Illinois Public Service Co.* (Ill. 2002) 767 N.E.2d 314, reversed on other grounds in *In re Commitment of Simons*
(continued...)

have rejected the requirement that trial courts perform a reliability analysis before juries may hear scientific expert testimony.[28/]

State supreme courts have noted many reasons for imposing a reliability standard. The Connecticut Supreme Court observed, for example, that the trial court is in the best position to evaluate the reliability of the foundation for an expert opinion. "[P]urely as a procedural matter, a judge is in a much better position than a juror to assess accurately the fundamental validity of such evidence . . . [¶] Judges [] have the benefit of reviewing briefs and other documents. [Citation.] . . . [¶] [A] trial judge has the power to request supplemental briefing on any issue that needs clarification," and a judge may "appoint an independent expert when necessary." (*State v. Porter*, *supra*, 698

27/ (...continued)
(Ill. 2004) 821 N.E.2d 1184 (*Frye* standard only applies to "novel" evidence), with *Kane v. Motorola, Inc.* (Ill.App.Ct. 2002) 779 N.E.2d 302 (analyzing expert testimony in non-novel case for reliability)]; Nevada [Note, *Waiting for Daubert: The Nevada Supreme Court and the Admissibility of Expert Testimony* (2002) 2 Nev. L.J. 158 ("Unfortunately, the Nevada rule for the admission of expert testimony remains unclear")]; Washington [see *Reese v. Stroh* (Wash. 1995) 907 P.2d 282, 286 ("Admissibility of a causation opinion under these circumstances is weighed under the general reliability standards of ER 702 and ER 703"), Tegland, 5B Wash. Prac. (2004 supp.) Evidence Law and Practice, § 702.19 ("As suggested by the concurring justices in *Reese,* the majority's opinion was less than definitive and may leave practitioners and trial judges wondering what Washington's rule *is* with regard to scientific testimony")].

28/ Alabama [*Courtaulds Fibers, Inc. v. Long* (Ala. 2000) 779 So.2d 198]; Arizona [*Logerquist v. McVey* (Ariz. 2000) 1 P.3d 113]; Kansas [*Kuhn v. Sandoz Pharmaceuticals Corp.* (Kan. 2000) 14 P.3d 1170]; Montana [see footnote 25, *ante*]; Utah [*State v. Adams* (Utah 2000) 5 P.3d 642]; Wisconsin [*State v. Davis* (Wis. 2002) 645 N.W.2d 913]. In addition, an intermediate appellate court in Pennsylvania decided against a reliability standard (see *Campbell-Perfilio v. PennDOT* (Pa.Com.Pl. 2004) 2004 WL 2212894), but the state Supreme Court apparently has not yet decided the issue (see *Grady v. Frito-Lay, Inc.* (Pa. 2003) 839 A.2d 1038 [holding that *Frye*, rather than *Daubert*, governs the admission of *novel* scientific evidence]).

A.2d at 748.) Other courts recognize that "[t]he primary function of the trial justice's gate-keeping role is to assure that the proposed expert testimony, presented as a scientifically valid theory, is not mere 'junk science.' [Citation.] As a result, the trial justice must ensure that the parties present to the trier of fact only expert testimony that is based on ostensibly reliable scientific reasoning and methodology." (*Owens v. Silvia* (R.I. 2003) 838 A.2d 881, 891; see also *State v. O'Key*, *supra*, 899 P.2d at p. 678 fn. 20.) Therefore, like California, these courts require experts "to identify the factual bases for their conclusions, explain their methodology, and demonstrate that both the factual bases and the methodology are scientifically reliable. That explanation will enable the trial court to determine whether the expert's opinion 'will assist the trier of fact to understand the evidence or determine a fact in issue,' [Citation], or whether the opinion is, in current parlance, 'junk science.'" (*Landrigan v. Celotex Corp.* (N.J. 1992) 605 A.2d 1079, 1086.)

Significantly, the emerging consensus among state courts that trial judges must examine the reliability of expert testimony does not depend on an express statutory reliability requirement. State courts have not hesitated to read a reliability requirement into an existing statutory scheme even when the relevant state statutes do not explicitly mention reliability.

New York case law illustrates this point. Like California, New York is a *Frye* state when it comes to the admission of *novel* scientific evidence, and it has not otherwise adopted *Daubert*. But the highest court in New York held in *People v. Wesley* (N.Y. 1994) 633 N.E.2d 451, that once *Frye* has been satisfied, "[t]he focus moves from the general reliability concerns of *Frye* to the specific reliability of the procedures followed to generate the evidence proffered and whether they establish a foundation for the reception of the evidence at trial. The trial court determines, as a preliminary matter of law, whether an adequate foundation for the admissibility of this particular

evidence has been established." (*Id.* at p. 458.)

Moreover, although New York's evidence statutes do not mention reliability,[29/] New York courts have begun to impose a reliability analysis on non-novel scientific expert testimony. For example, in *Parker v. Mobil Oil Corp.*, *supra*, 793 N.Y.S.2d 434, an intermediate New York appellate court reversed a trial court determination allowing an expert to testify that plaintiff contracted leukemia as the result of exposure to defendants' products. The court concluded that "the plaintiff's expert testimony should have been precluded on the ground that it was not scientifically reliable and therefore inadmissible." (*Id.* at p. 439.) "The studies upon which the plaintiff's experts relied ultimately reached the conclusion that increased levels of exposure to benzene have been shown to cause leukemia, a fact not disputed by the parties. However, the plaintiff's experts failed to make a causal connection, based upon a scientifically reliable methodology, between the plaintiff's specific level of exposure to benzene in gasoline and his [leukemia]." (*Id.* at pp. 438-439; see also *Wahl v. American Honda Motor Co.* (N.Y. 1999) 693 N.Y.S.2d 875 [holding that threshold reliability standard applies to expert testimony that is not scientific or novel]; *Styles v. General Motors Corp.* (N.Y.App.Div., July 21, 2005) _N.Y.S. 2d_ [2005 WL 1692622 at *4 (conc. opn. of Catterson, J.) [noting that the *Frye* general acceptance standard "is in keeping with the 'inherent power of all trial court judges to keep unreliable evidence ('junk science') away from the trier of fact regardless of the qualifications of the expert. A well-credentialed expert does not make invalid science valid merely

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29/ The only statute apparently addressing the admission of expert testimony in New York courts is one which provides: "Unless the court orders otherwise, questions calling for the opinion of an expert witness need not be hypothetical in form, and the witness may state his opinion and reasons without first specifying the data upon which it is based. Upon cross-examination, he may be required to specify the data and other criteria supporting the opinion." (N.Y. C.P.L.R. 4515 (McKinney 2005).)

by espousing an opinion'"].)

Plaintiffs ignore this overwhelming emerging consensus and cite instead to a handful of out-of-state authorities they claim reflect a rejection of reliability testing in states which, like California, have adopted a "general acceptance" standard for the admission of expert testimony based on novel scientific techniques.

For example, on pages 31 and 32 of their opening brief, plaintiffs cite cases from four jurisdictions ostensibly standing for the proposition that "trial judges without any special expertise should not be burdened with the role of passing judgment on the substantive merits of an expert's opinion." (OBOM, pp. 31-32 [citing *Howerton v. Arai Helmet, Ltd.*, *supra*, 597 S.E.2d 674; *Goeb v. Tharaldson*, *supra*, 615 N.W.2d 800; *Logerquist v. McVey*, *supra*, 1 P.3d 113; and *State v. Copeland* (Wash. 1996) 922 P.2d 1304]; see also OBOM, pp. 38-39 [citing *Goeb*, *Logerquist*, and *Grady v. Frito-Lay, Inc.* (Pa. 2003) 839 A.2d 1038, ostensibly for the proposition that "granting trial judges discretion to screen expert opinions for reliability poses an unacceptable risk of non-uniformity and arbitrary results"].)

Of course, as we have already explained (see pp. 37-40, *ante*), trial judges do not "pass[] judgment on the substantive merits of an expert's opinion" in determining the admissibility of an expert's opinion. Moreover, plaintiffs apparently confuse the question whether a jurisdiction accepts the *Daubert* test (neither North Carolina nor Minnesota does) with the question whether a jurisdiction requires a preliminary reliability analysis before expert testimony is admissible (both North Carolina and Minnesota do). In fact, both the North Carolina Supreme Court in *Howerton* and the Minnesota Supreme Court in *Goeb* confirmed that trial courts *must* undertake a reliability analysis before admitting expert testimony. (See *Howerton*, *supra*, 597 S.E.2d at p. 686 ["the trial court must determine whether the expert's method of proof is

sufficiently reliable as an area for expert testimony"]; *Goeb*, *supra*, 615 N.W.2d at p. 810 ["the particular evidence derived from [a methodology meeting the *Frye*] test must have a foundation that is scientifically reliable"]; *id.* at p. 813 ["the particular scientific evidence in each case must be shown to have foundational reliability [Citation.] [F]oundational reliability 'requires the "proponent of a . . . test [to] establish that the test itself is reliable and that its administration in the particular instance conformed to the procedure necessary to ensure reliability"'"].)[30/] *Goeb* also directly supports defendants' position here. In *Goeb*, the Minnesota Supreme Court upheld a trial court's decision to exclude the testimony of two experts regarding causation in a toxic torts case because the testimony was unreliable. One expert based his opinion upon unreliable documents and literature and the other expert used an unreliable methodology to conclude that plaintiff's exposure to a certain chemical led to plaintiff's injuries. In addition, both experts failed to review all of the plaintiff's medical records. (*Goeb*, *supra*, 615 N.W.2d at pp. 815-816.)

The Washington and Pennsylvania state supreme court decisions cited by plaintiffs do not support their position either. Although each has rejected *Daubert*, neither has ruled definitively on the scope of any other preliminary reliability analysis for expert testimony. The Washington court requires trial courts to conduct a reliability analysis under its Evidence Code but the precise contours of Washington's test are unclear. (See fn. 27, *ante.*) The Pennsylvania Supreme Court has rejected *Daubert* as applied to the question of the admissibility of *novel* scientific evidence, but has not decided whether *non*-novel scientific evidence must be reliable before it may be admitted into evidence. (See fn. 28, *ante.*) That leaves only Arizona, whose minority

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30/ Although *Howerton* announces a preliminary reliability test, that test appears to be much more lax than the one applicable under the California Evidence Code.

Logerquist opinion has been roundly criticized.[31/]

Despite plaintiffs' spin, the fact remains that 75% of sister states require a preliminary reliability analysis, leaving a handful of states to the contrary. This consensus among state courts is reinforced further by leading evidence scholars, including the scholars cited by plaintiffs (see OBOM, pp. 32-38), that courts should determine the reliability of expert testimony before it is introduced to the jury. (E.g., Giannelli & Imwinkelried, Scientific Evidence (2004 ed.) § 1-9; Kaye, et al., The New Wigmore: A Treatise on Evidence (2004 ed.) Expert Evidence, § 6.4.2, p. 228 ["Judges need not (and should not) become 'amateur scientists' in the sense of having to conduct their own experiments or data analyses. *In filtering out pseudo-science, speculation,*

31/ Plaintiffs rely on *Logerquist* extensively in their opening brief. (OBOM, pp. 32, 34, 35, 38, 44, 46; see also OBOM, p. 45 [relying on *Kuhn v. Sandoz Pharmaceuticals Corp.*, *supra*, 14 P.3d 1170, which simply follows *Logerquist*].) No other state court has adopted the holding and reasoning of *Logerquist*. And for good reason – *Logerquist*'s reasoning is flawed. Logerquist's primary flaw is that it fails to recognize the factfinding role of the judge in determining the admissibility of expert testimony. Indeed, *all five participants* in a recent law review symposium on the case – each of whom is a co-author of an evidence treatise – are critical of *Logerquist*. (See Kaye, *Choice and Boundary Problems in Logerquist, Hummert, and Kuhmo Tire* (2001) 33 Ariz. St. L.J. 41, 43 ["This article criticizes the treatment of the boundary problem in *Logerquist* . . ."]; Berger, *When is Clinical Psychology Like Astrology?* (2001) 33 Ariz. St. L.J. 75, 76 [criticizing one aspect of the *Logerquist* opinions as "another instance of 'I know it when I see it'"]; Faigman, *Embracing the Darkness: Logerquist v. McVey and the Doctrine of Ignorance of Science is an Excuse* (2001) 33 Ariz. St. L.J. 87, 89 ["*Logerquist* appears to be mainly an aberration. It is a dead-end detour along the path to scientific competence among judges and lawyers"]; Gianelli, *Scientific Evidence in Civil and Criminal Cases* (2001) 33 Ariz. St. L.J. 103 [criticizing *Logerquist* for holding that the same standard for judging admissibility of expert evidence applies in civil and criminal cases]; Flawed Assumptions, *supra*, 33Ariz. St. L.J. at p. 121 [criticizing *Logerquist* for misinterpreting the rules for the admissibility of expert testimony under Federal Rule of Evidence 104(a)].)

conjecture, and premature applications of purportedly scientific theories, they can rely on the testimony of scientists and external indications as to the validity of the theories and technologies offered in the courtroom" (emphasis added)]; Faigman et al., Modern Scientific Evidence (West 2002) § 1-3.4.1, p. 33 ["[A]llowing experts to . . . apply the science to the case without research supporting their ability to do so invites unfounded speculation"].)

Consistent with the courts in the vast majority of sister states and the prevailing opinion among legal scholars, this court should hold that trial courts must undertake a meaningful preliminary analysis of foundational reliability before allowing an expert to offer an opinion based on scientific evidence.

CONCLUSION

For the foregoing reasons, the judgment of the Court of Appeal should be affirmed.

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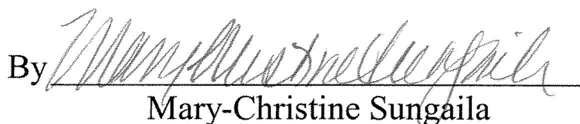
Respectfully submitted,

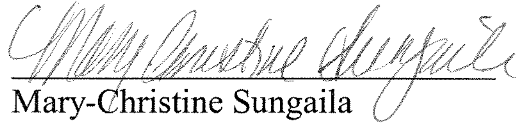
HORVITZ & LEVY LLP
ELLIS J. HORVITZ
DAVID M. AXELRAD
MARY-CHRISTINE SUNGAILA
STEPTOE & JOHNSON LLP
LAURENCE F. JANSSEN
LAWRENCE P. RIFF
MORGAN, LEWIS & BOCKIUS LLP
V. THOMAS MEADOR III
DEANNE L. MILLER

By 
Mary-Christine Sungaila
Attorneys for Defendants and Respondents
EXXONMOBIL CORPORATION and UNION OIL COMPANY OF CALIFORNIA dba UNOCAL

CERTIFICATE OF WORD COUNT
(Cal. Rules of Court, rule 28.1(d)(1))

The text of this brief consists of 16,430 words as counted by the Corel WordPerfect version 10 word-processing program used to generate the brief.

DATED: August 11, 2005



Mary-Christine Sungaila

PROOF OF SERVICE
[Code Civ. Proc., § 1013a]

I, **Kathy Turner**, declare as follows:

I am employed in the County of Los Angeles, State of California and over the age of eighteen years. I am not a party to the within action. I am employed by Horvitz & Levy LLP, and my business address is 15760 Ventura Boulevard, 18th Floor, Encino, California 91436. I am readily familiar with the practice of Horvitz & Levy LLP for collection and processing of correspondence for mailing with the United States Postal Service. In the ordinary course of business, such correspondence would be deposited with the United States Postal Service, with postage thereon fully prepaid, the same day I submit it for collection and processing for mailing. On **August 11, 2005**, I served the within document entitled:

ANSWER BRIEF ON THE MERITS

[Submitted Concurrently with Application for Leave to File Oversize Brief]

on the parties in the action by placing a true copy thereof in an envelope addressed as follows:

Parties Served:

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and, following ordinary business practices of Horvitz & Levy LLP, by sealing said envelope and depositing the envelope for collection and mailing on the aforesaid date by placement for deposit on the same day in the United States Postal Service at 15760 Ventura Boulevard, Encino, California.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration was executed on **August 11, 2005**, at Encino, California.

Kathy Turner

SERVICE LIST
Antonio Aguilar, et al. v. Exxon Mobil Corp., et al.
Court of Appeal Case No. B166347
California Supreme Court Case No. S132167
Judicial Council Coordination Proceeding Number 2967
"Lockheed Litigation Cases" (Plaintiffs Group 4 Group 5 Retrial)

INDIVIDUAL/PARTY SERVED	PARTY REPRESENTED
Laurence F. Janssen, Esq. Lawrence P. Riff, Esq. Steptoe & Johnson LLP 633 West Fifth St., 7th Floor Los Angeles, CA 90071 (213) 439-9599 • Fax#: (213) 439-9400	Attorneys for Defendant and Respondent, Exxon Corporation [Courtesy Copy]
V. Thomas Meador III, Esq. Deanne L. Miller, Esq. Morgan, Lewis & Bockius LLP 300 S. Grand Avenue, 22nd Floor Los Angeles, California 90071-3132 (213) 612-2554 • Fax#: (213) 612-2500	Attorneys for Defendant and Respondent Union Oil Company of California dba Unocal [Courtesy Copy]
Thomas V. Girardi, Esq. Howard B. Miller, Esq. Robert W. Finnerty, Esq. Carrie J. Rognlien, Esq. Girardi & Keese 1126 Wilshire Boulevard Los Angeles, California 90017 (213) 977-0211 • Fax#: (213) 481-4550	Attorneys for Plaintiffs and Appellants Antonio Aguilar; Sandy B. Arnold, Edward Basura; Russell Bates; Braxton G. Berkley; Chris Lee Brunson; Zoda Butler; Rudy J. Dominguez, Sr.; Edward Espino; Michael P. Esquivel; Donald Garin; Helen F. Gover; Eddie L. Hall; Howard Love; Renee Lyons; David H. Meza; Johnny Moody; Jack Montoya; Joe Sanchez, Artie Shaw; Lamar Shelby; Mattie Walker; Ruth E. Wilson; Frank Windhausen
Martin N. Buchanan, Esq. Symphony Towers 750 B. Street, Suite 2640 San Diego, California 92101 (619) 238-2426 • Fax#: (619) 238-6036	Attorneys for Plaintiffs and Appellants (as of the filing of the Petition for Review)
Jeffrey C. McIntyre, Esq. Robert Garcia, Esq. Law Offices of Jeffrey C. McIntyre 5000 North Parkway Calabasas, # 220 Calabasas, California 91302-1494 (818) 222-2391 • Fax#: (818) 591-9159	[Courtesy Copy]
Ernesto J. Getto, Esq. Kirk A. Wilkinson, Esq. Cynthia H. Cwik, Esq. Latham & Watkins LLP 633 West Fifth Street, Suite 4000 Los Angeles, California 90071 (213) 485-1234 • Fax#: (213) 891-8763	Attorneys for Amici Curiae American Chemistry Council, et al. in the Court of Appeal [COURTESY COPY ONLY]

SERVICE LIST
Antonio Aguilar, et al. v. Exxon Mobil Corp., et al.
Court of Appeal Case No. B166347
California Supreme Court Case No. S132167

INDIVIDUAL/PARTY SERVED	PARTY REPRESENTED
Rene Tatro, Esq. Tatro Tekosky Sadwick & Mendelson LLP 444 S. Flower Street, 31st Floor Los Angeles, California 90071 (213) 229-4600 • Fax#: (213) 229-2770	Attorneys for Amici Curiae American Chemistry Council, et al. in the Court of Appeal [COURTESY COPY ONLY]
Martin S. Kaufman, Esq. Atlantic Legal Foundation 60 East 42nd Street, Suite 2102 New York, New York 10165 (212) 867-3322 • Fax#: (212) 867-1022	Attorneys for Amici Curiae Robert K. Adair, et al. in the Court of Appeal [COURTESY COPY ONLY]
Fred J. Hiestand, Esq. 1121 L Street, Suite 404 Sacramento, California 95814 (916) 448-5100 • Fax#: (916) 442-8644	Attorneys for Amici Curiae Californians Allied for Patient Protection and the Civil Justice Association of California in the Court of Appeal [COURTESY COPY ONLY]
John A. Torribio, Judge Southeast District - Norwalk 12720 Norwalk Boulevard, Dept. W Norwalk, California 90650-3188	Judicial Council Coordination Los Angeles Superior Court Proceeding No. 2967 (Group 4 Group 5 Retrial)
Clerk of the Court California Court of Appeal Second Appellate District - Div. 3 300 S. Spring Street, 2nd Floor • N. Tower Los Angeles, California 90013-1213	Lockheed Litigation Group 4/5 Retrial (Aguilar) Court of Appeal Case No.: B166347