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18 UNITED STATES DISTRICT COURT  
19 NORTHERN DISTRICT OF CALIFORNIA

20 BETTY LOU HESTON, individually, and )  
21 ROBERT H. HESTON, individually and as )  
22 the personal representatives of ROBERT C. )  
23 HESTON, deceased, )

24 Plaintiffs,

25 vs.

26 CITY OF SALINAS and SALINAS POLICE )  
27 DEPARTMENT, SALINAS POLICE CHIEF )  
28 DANIEL ORTEGA, MICHAEL DOMINICI, )  
CRAIG FAIRBANKS, JAMES GODWIN, )  
LEK LIVINGSTON, VALENTIN )  
PAREDEZ, JUAN RUIZ, TIM SIMPSON )  
and TASER INTERNATIONAL, INC., and )  
DOES 1 to 10, )

Defendants.

Case No.: C 05-03658 JW

[James Ware, United States District Judge]

**DEFENDANT TASER INTERNATIONAL, INC.'S NOTICE OF MOTION AND MOTION IN LIMINE NO. 1 TO EXCLUDE EXPERT OPINIONS AND TESTIMONY OF DR. MARK R. MYERS, OR, IN THE ALTERNATIVE, FOR DAUBERT HEARING; MEMORANDUM OF POINTS AND AUTHORITIES; DECLARATION OF MARK. W. KROLL; [PROPOSED] ORDER**

[O'Linn Decl. in Support of Defendant TASER's Motions in Limine Nos. 1, 2, and 3 filed concurrently.]

PTC Date: 4-29-08  
Time: 1:00 pm.  
Courtroom: 8

Final PTC: 4-29-08  
Trial: 5-13-08

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TO PLAINTIFFS AND THEIR ATTORNEYS OF RECORD:

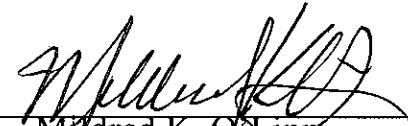
PLEASE TAKE NOTICE THAT on April 29, 2008, at 1:00 p.m., or as soon thereafter as the matter may be heard in Courtroom 8 of the above-captioned court, located at 280 S. First Street, San Jose, California 95113-3008, Defendant TASER INTERNATIONAL, INC. ("TASER") will move to exclude the expert opinions and testimony of plaintiffs' expert, Dr. Mark R. Myers, or, in the alternative, for a *Daubert* hearing.

This motion is made on the grounds that Dr. Myers is not qualified to testify as an expert witness and his proffered expert opinions do not have adequate support. *Daubert v. Merrell Dow Pharms.*, 509 U.S. 579 (1993).

This motion is based on the Memorandum of Points and Authorities, the Declarations of Mildred K. O'Linn and Mark. W. Kroll and attached exhibits, all the pleadings, records and files in this action and upon such further oral and documentary evidence as may be presented at the hearing of this motion.

DATED: March 28, 2008

MANNING & MARDER  
KASS, ELLROD, RAMIREZ LLP

By:   
Mildred K. O'Linn  
Attorneys for Defendant,  
TASER INTERNATIONAL, INC.

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**MEMORANDUM OF POINTS AND AUTHORITIES**

**1. INTRODUCTION.**

Plaintiffs allege claims against TASER International, Inc. (“TASER”) for products liability (negligence and strict liability) arising from the death of Mr. Robert C. Heston on February 20, 2005, after an incident that occurred on February 19, 2005, involving members of the Salinas Police Department and the use of TASER® M26 Electronic Control Devices (“ECDs” or “devices”).

Plaintiffs have designated Dr. Mark R. Myers (“Myers”) as an expert in this case. Myers is expected to offer opinions on the issue of the cause of death of Mr. Heston and in particular regarding the physiological effects of the ECDs on the human body and/or whether application of the ECDs caused the death of Mr. Heston.

TASER requests an order in limine excluding Myers’ opinions on causation at trial because: 1) Myers does not possess the requisite qualifications, knowledge, skill, experience, training, or education to render each of his opinions; 2) Myers’ three theories of causation (vasovagal, metabolic acidosis, and respiratory acidosis) are not the product of reliable principles and methods; and 3) Myers’ has failed to reliably apply the principles and methods to the facts of the case.

**2. ADMISSIBILITY OF EXPERT TESTIMONY.**

Federal Rule of Evidence 702 governs the admission of expert opinion testimony:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

The trial court has broad discretion concerning the admissibility of expert testimony. *Hangarter v. Provident Life & Accident Ins. Co.*, 373 F.3d 998, 1017 (9th Cir. 2004). In this regard, it is the trial judge's task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand. *Daubert, supra*, 509 U.S. at 597.

1 The Supreme Court in *Daubert* makes it plain that the trial court is to act as a  
2 gatekeeper in screening such testimony for relevance and reliability, that is, to make an  
3 assessment whether the reasoning and methodology underlying the testimony is  
4 scientifically valid. *Daubert, supra*, 509 U.S. at 591-93. This "gatekeeping" obligation  
5 applies not only to testimony based on scientific knowledge, but to all expert testimony.  
6 *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 149 (1999).

7 To be admissible, the expert's testimony must be both reliable and relevant.  
8 *Daubert, supra*, 509 U.S. 579; *Kumho, supra*, 526 U.S. 137. The reliability requirement  
9 ensures "that an expert, whether basing testimony upon professional studies or personal  
10 experience, employs in the courtroom the same level of intellectual rigor that  
11 characterizes the practice of an expert in the relevant field." *Kumho, supra*, 526 U.S. at  
12 152. Factors to consider in making the reliability inquiry are: (1) whether the theory,  
13 reasoning, methodology or technique can be and has been tested; (2) whether it has been  
14 subjected to peer review and publication; (3) the known or potential rate of error; and  
15 (4) whether the method or theory utilized enjoys widespread acceptance. *Daubert*, 509  
16 U.S. at 593-94.

17 In addition to being reliable, expert testimony must also be relevant in order to  
18 be admissible. *Daubert*, 509 U.S. at 589. Whether testimony is relevant depends on  
19 whether the testimony can properly be applied to assist the trier of fact to decide facts  
20 in issue. *Ibid*. To satisfy the relevance requirement, the expert's testimony must assist  
21 the trier of fact in understanding or determining a fact in issue. *Stilwell v. Smith &*  
22 *Nephew, Inc.*, 482 F.3d 1187, 1191-1192 (9th Cir. 2007); *Daubert, supra*, 509 U.S. at  
23 591. In assessing relevance, the court must look to the governing substantive legal  
24 standard. *Daubert v. Merrell Dow Pharmaceuticals*, 43 F.3d 1311, 1320 (9th Cir.  
25 1995). Here, Myers' expert opinion bears primarily on the causation elements of  
26 plaintiffs' claims. California law requires that a plaintiff establish "a reasonable medical  
27 probability based upon competent expert testimony that the defendant's conduct  
28 contributed to plaintiff's injury." *Rutherford v. Owens-Illinois*, 16 Cal.4th 953, 977

1 (1997).

2 The offering party must show by a preponderance of the evidence that 1) the  
3 expert is qualified to render the opinion; and 2) the opinion offered has adequate  
4 support. *Daubert, supra*, 509 U.S. at 588-90. Expert testimony is not admissible if it  
5 is speculative. *See GE v. Joiner*, 522 U.S. 136, 146 (1997) (“A court may conclude that  
6 there is simply too great an analytical gap between the data and the opinion proffered.”)

7 Expert opinions on causation are properly excluded if the *Daubert* standard of  
8 review is not satisfied. *See, e.g., Lash v. Hollis*, 2007 U.S. Dist. LEXIS 3633, \*12 (D.  
9 Mo. 2007) (plaintiff’s expert opinion on the effects of TASER ECD deployments on  
10 plaintiff was excluded under *Daubert* because court found plaintiff was not qualified to  
11 testify as an expert witness and his reliance on one scholarly article on effects of TASER  
12 ECD deployments “will not assist the trier of fact in understanding the evidence or  
13 determining the facts in issue, and thus they must be excluded.”).

14 As set out below, Myers is not qualified to testify as an expert witness and his  
15 proffered expert opinions do not have adequate support. Accordingly, under *Daubert*,  
16 Myers’ opinions and testimony on causation should be excluded.

17  
18 **3. MYERS’ OPINIONS THAT THE ECDS CAUSED MR. HESTON’S**  
19 **DEATH ARE NOT SUPPORTED BY THE SCIENTIFIC EVIDENCE AND**  
20 **SHOULD BE EXCLUDED.**

21 Plaintiffs’ expert Myers intends to offer expert opinions as to whether the  
22 application of the ECDs caused the death of Mr. Heston. Based on Myers’ reports dated  
23 November 28, 2006, January 2, 2007, March 11, 2007, and April 27, 2007, and his  
24 deposition testimony taken on April 28, 2007, Myers will be offering expert testimony  
25 regarding three theories of causation:

26 1. Vasovagal theory of causation: ECDs caused pain which allegedly caused  
27 a vasovagal reaction which allegedly lead to asystole.

28 2. Metabolic acidosis theory of causation: The ECDs caused violent and



1 prolonged muscle contractions in Mr. Heston which allegedly significantly raised the  
2 lactic acid levels in his blood; his body failed to correct for this, and allegedly the  
3 acidosis was so severe that it shut down his heart.

4 3. Respiratory acidosis theory of causation: The ECDs allegedly suffocated  
5 Mr. Heston by stopping his breathing which made his blood acidic which severely  
6 slowed his heart into a flat-line (asystole) condition.

7 Myers dropped the previous theories as to causation which were set out in his first  
8 three reports:

9 1. Rhabdomyolysis. In Myers' previous expert reports, he put forth the  
10 theory that the ECDs could have directly caused rhabdomyolysis in Mr. Heston. In  
11 other words, the muscle stimulation was allegedly so dramatic that it caused muscle cells  
12 to die and the by-products of this muscle cell death clogged Mr. Heston's kidneys and  
13 killed him. Obviously, Mr. Heston had rhabdomyolysis as this is a common feature of  
14 methamphetamine abuse, dramatic extended exercise, exertion, struggle with police, and  
15 of excited delirium. (6-18-07 Kroll Report:22.) Myers admitted that he is not an expert  
16 on the effects, if any, of a TASER ECD and the risks of rhabdomyolysis. (Myers  
17 depo.:19:7-10.) On the morning of his deposition, Myers brought in a fourth report,  
18 dated April 27, 2007, in which he dropped the theory of rhabdomyolysis.

19 2. Direct stimulation of the heart (ventricular fibrillation [VF]). In Myers'  
20 previous expert reports, he put forth the theory that the ECDs could have directly  
21 induced VF in Mr. Heston. In other words, the ECD electrocuted Mr. Heston. In his  
22 fourth report dated April 27, 2007, produced on the day of his deposition, Myers  
23 explicitly states: "Consideration of the circumstances of Mr. Heston's collapse and the  
24 known science of TASER [ECD] leads me to conclude that direct stimulation of the  
25 heart by TASER [ECD] was unlikely." (Myers 4-27-07 Report:3.)

26 3. Deductive. In Myers' 1-2-07 report, his theory was: "All people with  
27 methamphetamine intoxication do not die of the methamphetamine or of 'excited  
28 delirium.' In the present case the only significant adverse physical stimulus was from



1 the TASER [ECD] applications. Are we really expected to believe that the TASER  
2 [ECD] has no physiologic effects when delivered in the manner of this case? If so, then  
3 if the police had simply waited outside for 5 to 10 minutes, this man would have died  
4 spontaneously. I could not explain such a death.” (Myers 1-2-07 Report:2.) In Myers’  
5 fourth report, dated April 27, 2007, he does not mention this theory. In his deposition,  
6 Myers testified that he was not suggesting that the police should have waited for 5 or  
7 10 minutes or that the police wait outside.” (Myers depo.:101:14-25.) Myers testified  
8 that he was not aware that any police actions in the resuscitation adversely impacted Mr.  
9 Heston. (Myers depo.:103:15-20.) Myers admitted that he was not asked to give an  
10 opinion about the conduct of the police in this case. (Myers depo.:102:1-6.)

11 While Myers appears to have dropped his police action theory, even if he still  
12 intends on offering his deductive theory as a cause of death, this theory has numerous  
13 scientific and logical errors:

14 a) Since people do not always die from methamphetamine, Myers assumes  
15 that people could never die from methamphetamine alone. This is clearly erroneous. (4-  
16 6-07 Kroll Report: 15.)

17 b) Myers incorrectly states that the ECDs were the only contributing  
18 stress on Mr. Heston in this incident which is clearly false. An experienced police  
19 officer stated that he had never seen someone fight so hard in his whole career. (Kroll  
20 4-6-07 Report:15.)

21 c) This theory does not offer any scientific or medical links from the ECDs  
22 to Mr. Heston’s death. Myers merely states that he could not otherwise explain such a  
23 death. This would be more convincing if Myers were able to refute the conclusion of  
24 excited delirium from the other experts. (Kroll 4-6-07 Report:15.)

25 e) A strong criticism to this level of illogic was written a decade ago and is  
26 repeated here verbatim: “Legal reasoning favours single proximate causes rather than  
27 medical conditions, but the intervention most proximate to the time of death is not  
28 necessarily the cause of death. Similarly, popular journalism favours controversy and

1 blame rather than balance and exploration.” (Kroll 4-6-07 Report, pg. 15, citing  
2 Farnham FR, Kennedy HG. Acute excited states and sudden death. Bmj  
3 1997;315:1107-8.)

4 This motion will focus on the three current causation theories offered by Myers:  
5 1) vasovagal; 2) metabolic acidosis, and 3) respiratory acidosis.

6 As set out in subsection (a), Myers is not qualified to render an expert opinion  
7 regarding the effects of the ECDs on the human body and/or whether application of the  
8 ECDs contributed to the death of Mr. Heston.

9 Even assuming, arguendo, that the Court finds Myers is qualified to render an  
10 expert opinion as to whether application of the ECDs contributed to the death of Mr.  
11 Heston, as set out in subsection (b), Myers’ three theories of causation (vasovagal,  
12 metabolic acidosis, and respiratory acidosis) are not supported by the scientific evidence  
13 and therefore should be excluded.

14  
15 **a. Myers Is Not Qualified to Render an Expert Opinion.**

16 Based on Myers’ own admissions, he is not qualified to render an expert opinion  
17 regarding the effect of the ECDs on the human body.

18 In his deposition, Myers admitted he is not a forensic pathologist, nor an electrical  
19 engineer, nor an expert in excited delirium, nor an expert in agitated delirium, nor an  
20 expert in neuroelectric related syndrome, nor an expert in drug-induced excited delirium,  
21 nor an expert in drug-induced agitated delirium, nor an expert on metabolic acidosis, nor  
22 an expert on in-custody deaths involving law enforcement. (Myers depo: 14:24-15:24.)

23 Myers also admitted he is not a toxicologist, nor a pharmacologist, nor an expert  
24 in neuropharmacology, nor an expert on electrical effects throughout the entire human  
25 body, nor an expert on electronic control devices. (Myers depo:15:24-16:17.)

26 Myers also admitted he is not an expert on TASER brand electronic control  
27 devices, nor an expert on Advanced TASER M26 (“M26” or “M26 ECD”) electronic  
28 control devices, nor an expert on the TASER X26. (Myers depo:16:18-25.)

1 Myers also admitted that he made mistakes regarding TASER ECD electrical  
2 characteristics from his first report. Myers accepted as correct the numbers given by  
3 TASER's expert, Mark. W. Kroll, that the primary phase pulse was 10 microseconds,  
4 delivered peak voltage of 5,000 volts, average voltage of 1.3 volts, and energy propulsed  
5 delivered into load 1.5 joules. (Myers depo.:10:6-12:8.)

6 Myers is not an expert on the effects on a human of a TASER ECD, nor an expert  
7 on the effects, if any, of a TASER ECD on a human's arterial blood gases. (Myers  
8 depo:17:1-7.) Myers is not an expert on the effects, if any, of a TASER ECD on a  
9 human's pulmonary function. (Myers depo:17:8-11.)

10 Myers testified that he considers himself knowledgeable in the area of the effects  
11 of the TASER ECD on the human's cardiac system based upon the research he has done,  
12 but admitted that whether or not that rises to the level of an expert, he does not know.  
13 (Myers depo:17:12-18:5.)

14 Myers has not published any papers on the effects of a TASER ECD on a human's  
15 cardiac system. He has never done any presentations of the effects, if any, of a TASER  
16 ECD on a human's cardiac system. He has never been recognized in a court of law as  
17 an expert on the effects, if any, of the TASER ECD on a human's cardiac system.  
18 (Myers depo: 18:6-17.)

19 Myers read some research but has never communicated with any of the authors  
20 of that research regarding the effects, if any, of a TASER ECD on a human cardiac  
21 system. Myers is not an expert on the effects, if any, of a TASER ECD on the human  
22 skeletal muscles. Myers is not an expert on the effects, if any, of a TASER ECD and the  
23 breakdown of skeletal muscles. (Myers depo: 18:18-19:6.)

24 Myers is not an expert on the effects, if any, of a TASER ECD and the risks of  
25 rhabdomyolysis. (Myers depo:19:7-10.)

26 Since Myers is not qualified to render an expert opinion regarding the effect of  
27 the TASER ECD on the human body, his opinion that the TASER ECD caused the death  
28 of Mr. Heston should be excluded under *Daubert*.

1           **Myers' Opinion re Causation Based on Vasovagal Syncope Is Not**  
2           **Supported by The Scientific Evidence and Should Be Excluded.**

3           Myers' unsupported vasovagal theory is that the TASER ECD caused pain which  
4           allegedly caused a vasovagal reaction leading to asystole. The vasovagal theory was  
5           first introduced in Myers' second expert report dated January 2, 2007 and supported by  
6           no one, even his own, now withdrawn, fellow expert Dr. Werner U. Spitz, who called  
7           the vasovagal death theory "voodoo." (Spitz 5-15-07 depo.:100:12-22.)

8           Myers testified in his deposition that a vasovagal reaction would occur within one  
9           second of Mr. Heston experiencing the pain of a TASER [ECD] discharge. (Myers  
10          depo.:90:5-6.) Under this theory, the TASER ECD hurt and this made Mr. Heston's  
11          heart go so slow that it stopped (flat-lined [asystole]). As set out in the expert reports of  
12          Defendant TASER's expert, Mark W. Kroll, this vasovagal theory has many  
13          fundamental scientific problems:

14          1)    Vasovagal syncope is not possible with extreme agitation. A vasovagal  
15          condition requires the loss of sympathetic drive while agitated people have maximum  
16          sympathetic drive. To use the automobile analogy, the car is going so fast that the brakes  
17          cannot make it instantly stop. (6-18-07 Kroll Report:25.)

18          2)    Methamphetamine kills pain equally as well as morphine and thus Mr.  
19          Heston was likely not feeling pain. There is no indication in the record that Mr. Heston  
20          experienced pain from any ECD current. (6-18-07 Kroll Report:25.)

21          3)    Outside of a head injury after falling, Dr. Kroll could only find one possible  
22          fatality in recorded medical literature from a vasovagal response. (6-18-07 Kroll  
23          Report:25.) Thus, Myers' vasovagal theory is not supported by the scientific literature.

24          4)    Myers admits that he has never seen a case of a fatal vasovagal reaction in  
25          his 20 year career. (6-18-07 Kroll Report:25-26.)

26          Q    You had mentioned you're immersed in vasovagal reactions  
27          every day; correct?

28          A    Yes.

1 Q But yet you have never seen a death in your 20 years. Does that imply that  
2 vasovagal reaction is not lethal?

3 A It implies I am a good doctor.

4 Q Can vasovagal response occur in your patients when you're not present?

5 A Yes.

6 Q Has anyone died in one of those situations?

7 A No. (Myers depo.:97:2 -13.)

8 5) The idea of a fatal vasovagal reaction is completely and unequivocally  
9 rejected by plaintiffs' other causation expert, Dr. Spitz. (6-18-07 Kroll Report:26.)

10 In his deposition, Dr. Spitz testified:

11 Q Do you— did you form any opinion in your review of the materials provided  
12 to you as to whether or not a vasovagal response played any role in Mr  
13 Heston's death?

14 A You know, vasovagal response is like voodoo. (Spitz 5-15-07  
15 depo:100:12-16.)

16 Q And just to be clear, you also stated in your fifty thousand death autopsies  
17 that you performed in your career, how many times have you found the  
18 cause of death to be a vasovagal response or vasovagal syncope? I believe  
19 you said none. Just want to verify.

20 A Yes. I agree. I was going to try and tell it to you, to tell you that I do not  
21 recall a single such instance. (Spitz depo:107:1-9.)

22 6) The purported end effect — asystole — is, however, highly associated with  
23 excited delirium which theory Myers rejects. (6-18-07 Kroll Report:26.)

24 7) The unsupported vasovagal theory requires the unreachable assumption that  
25 Mr. Heston was able to fight even after he had fainted. Otherwise the struggle from Mr.  
26 Heston would have ceased immediately. (6-18-07 Kroll Report:26-27.)

27 Myers refused to admit this fundamental problem in his deposition:

28 Q Have you ever had a vasovagal patient that maintained full strength and

1 full consciousness?

2 A Yes.

3 Q How many times approximately, if you know?

4 A Many times. Commonplace. (Myers depo.:95:23-96:2.)

5 Dr. Kroll has asked many of Myers' colleagues if they had ever had a patient  
6 maintain full consciousness and strength during a vasovagal reaction. None of them  
7 have. If Myers truly had had such an unusual patient, he would have had no problem  
8 getting an anecdotal case study published. (6-18-07 Kroll Report:27.)

9 Based on the foregoing, Myers' opinion that TASER ECD pain caused a  
10 vasovagal reaction leading to asystole is wholly unsupported by the scientific evidence  
11 and should be excluded.

12 **c. Myers' Opinion re Causation of Death Based on Metabolic and**  
13 **Respiratory Acidosis Is Not Supported by the Scientific Evidence and**  
14 **Should Be Excluded.**

15 **i. Respiratory Acidosis.**

16 Myers breaks his acidosis theory of causation into two separate theories: 1)  
17 respiratory acidosis; and 2) metabolic acidosis. The respiratory theory in lay terms is that  
18 the ECD allegedly suffocated Mr. Heston by stopping his breathing which made his  
19 blood acidic which severely slowed his heart into a flat-line (asystole) condition.  
20 Myers' theory of respiratory acidosis has numerous fundamental scientific problems:

21 1) ECDs do not stop breathing in humans. (6-18-07 Kroll Report: 28.)  
22 Published human studies from both UCSD and the Univ. of Minnesota have shown that  
23 a TASER ECD does not interfere with breathing. The assumption that ECDs stop  
24 breathing is based on a misapplication of the Jauchem pig study which reported that pigs  
25 stopped breathing during extended TASER X26 applications. (6-18-07 Kroll Report:  
26 44.)

27 Myers' sole reliance on the Jauchem porcine model study is not sufficient to  
28 prove scientific validity under *Daubert*. See, e.g., *Daubert*, 43 F.3d at 1319-20



1 (rejecting experts' opinions who relied on animal studies, chemical structure analyses,  
2 and epidemiological data when experts failed to clearly demonstrate scientific  
3 methodology); *Conde v. Velsicol Chem. Corp.*, 24 F.3d 809, 814 (6th Cir.1994) (finding  
4 animal studies inadequate for showing causation of disease in humans with chlordane  
5 exposure). Extrapolations from animal studies to human beings generally are not  
6 considered reliable in the absence of a credible scientific explanation of why such  
7 extrapolation is warranted. *See Viterbo v. Dow Chemical Co.*, 826 F.2d 420 (5th Cir.  
8 1987) (excluding the evidence where there was only a single animal study of picloram  
9 and it showed a link to a disease completely different than plaintiff's diseases);  
10 *Richardson v. Richardson-Merrell, Inc.*, 857 F.2d 823, 830 (D.C. Cir. 1988) (excluding  
11 animal studies of Bendectin because of the overwhelming body of contrary  
12 epidemiological evidence and the admissions of the expert that animal studies merely  
13 raise a suspicion of causation in humans); *Lynch v. Merrell-National Laboratories*, 830  
14 F.2d 1190, 1194 (1st Cir. 1987) (excluding animal studies of Bendectin where they  
15 stood in the face of significant contrary epidemiological data); *Turpin v. Merrell Dow  
16 Pharmaceuticals, Inc.*, 959 F.2d 1349, 1360 (6th Cir. 1992)(excluding testimony where  
17 the record failed to make clear how the animal studies were sufficient to show that  
18 Bendectin causes birth defects more probably than not).

19 In addition, Jauchem later published a letter in Forensic Science International  
20 indicating that none of the pigs had died in his studies. Jauchem also noted that his  
21 study could not be solely relied upon regarding human experiences. See Jauchem,  
22 James R., Reply to Letter to the Editor, Forensic Science International; letter dated  
23 August 28, 2006, Re: Acidosis, lactate, electrolytes, muscle enzymes, and other factors  
24 in the blood of *Sus scrofa* following repeated TASER [ECD] exposures. Forensic  
25 Science International, Volume 168, Issue 1, Pages e19-e19 J. Jauchem. (Exhibit V to  
26 O'Linn Decl.) The last paragraph of Jauchem's August 28, 2006 letter states: "It is  
27 important to note that our exposure conditions were somewhat extreme compared with  
28 those commonly experienced during civilian law-enforcement use of TASER



1 International's Advanced TASER X26. Therefore, it would not be prudent to draw  
2 conclusions about such use on the basis of our study alone." *Ibid.*

3 2) Mr. Heston never stopped breathing. It is hard to fight, resist, and/or  
4 struggle while holding your breath. (6-18-07 Kroll Report:28.)

5 3) Even if the ECDs stopped Mr. Heston's breathing, a five second holding  
6 of the breath is not life threatening. (6-18-07 Kroll Report: 28.)

7 4) TASER ECD applications do not cause any significant increase in acidity  
8 in humans. (6-18-07 Kroll Report: 28.)

9 5) Acidosis and asystole are, however, highly associated with excited  
10 delirium. (6-18-07 Kroll Report:28.)

11 This acidosis theory also contradicts Myers' opinion that Mr. Heston suffered a  
12 vasovagal episode with the first one second of TASER [ECD] application. Myers made  
13 it very clear in his deposition that a vasovagal reaction was not an "either-or" causation  
14 competing with acidosis as a causation. He opined that the vasovagal reaction occurred  
15 regardless of any acidosis:

16 Q. You just stated that the vasovagal is possible with as little as a second. Are  
17 you stating to a reasonable degree of medical and scientific certainty based  
18 upon scientifically reliable data that Mr. Heston experienced a vasovagal  
19 response in this case?

20 A. I believe that vasovagal response would be expected in this circumstance.

21 Q. You used the term expected. Going back, can you say to a reasonable  
22 degree of medical and scientific —

23 A. I believe there are multiple causes in this case. (Myers depo.:90:12-24.)

24 In other words, Mr. Heston definitely had a vasovagal episode. If that was true,  
25 then he would have stopped his resisting, his arms would have released and the struggle  
26 and possible ECD current would have ceased. (6-18-07 Kroll Report:30.) The acidosis  
27 theories cannot live with the vasovagal theory. If the TASER ECD killed Mr. Heston  
28 within 1 second (due to the vasovagal response) then any acidosis from the alleged

1 further ECD currents is irrelevant. Once someone is dead they are dead.

2 Myers' acidosis theory was soundly rejected by plaintiffs' other, now withdrawn,  
3 expert, Dr. Spitz. In discussing all of the sources of acidosis for Mr. Heston, including  
4 his methamphetamine levels, extreme struggle, and the time from the collapse until the  
5 first hospital blood test, Dr. Spitz stated that the contribution of the TASER ECD  
6 applications was "probably very little." (Spitz depo.:105:17-23.)

7 **ii. Metabolic Acidosis**

8 Myers' metabolic theory in lay terms is that the ECDs caused violent and  
9 prolonged muscle contractions in Mr. Heston which significantly raised the lactic acid  
10 levels in his blood; his body failed to correct for this, and the acidosis was allegedly so  
11 severe that it shut down his heart. Myers' theory of metabolic acidosis also is wrong,  
12 and is wholly lacking in scientific support and reliability, for several reasons.

13 1) Myers is accurately describing the end stage of an excited delirium death.  
14 Excited delirium brings on metabolic derangements — specifically acidosis — which  
15 often leads to a cardiac arrest from asystole. (6-18-07 Kroll Report:30.)

16 2) The total of 5-9 seconds of ECD application caused only a tiny muscle  
17 contraction. (6-18-07 Kroll Report:30.)

18 3) TASER ECD applications do not cause any significant increase in acidity  
19 in humans. (6-18-07 Kroll Report:30.)

20 4) Significant metabolic acidosis from mere exercise - in the absence of  
21 stimulant drugs - is rare enough that instances rate a published case study. (6-18-07  
22 Kroll Report:30.)

23 5) An experienced police officer, Godwin, described Mr. Heston as having  
24 "super human strength" and had never seen anyone so resistant in his whole career.  
25 That ferocious fighting, combined with the damage from years of dangerous illegal drug  
26 abuse, and a prolonged period of hyperactivity — including beating his own father —  
27 is what caused Mr. Heston's acidosis. (6-18-07 Kroll Report:30.)

28 6) Myers' fellow expert, Dr. Spitz, has testified that the contribution of the

1 ECD to Mr. Heston's acidosis was "Probably very little." (Spitz depo.:105:17-25.)

2 Based on the foregoing, Myers' opinion that respiratory and/or metabolic acidosis  
3 from application of the ECDs caused the death of Mr. Heston is wholly unsupported by  
4 reliable scientific evidence and should be excluded.

5  
6 **4. MYERS' REJECTION OF EXCITED DELIRIUM DOES NOT COMPORT**  
7 **WITH THE OVERWHELMING EVIDENCE THAT EXCITED**  
8 **DELIRIUM INDUCED ACIDOSIS CAUSING MR. HESTON'S DEATH.**

9 As explained in TASER's expert Kroll's first report dated December 1, 2006, Mr.  
10 Heston had 12 of 12 signs from a typical short checklist for excited delirium. (12-1-06  
11 Kroll Report:20; 6-18-07 Kroll Report: 13.) Myers' rejection of the theory of excited  
12 delirium does not withstand scrutiny.

13 In his first report dated November 28, 2006, Myers opined that the evidence did  
14 not appear to support a diagnosis of excited delirium. At his deposition, Myers  
15 attempted to deny the existence of excited delirium. (Myers depo:21:24-35:9.) On the  
16 day of his deposition, Myers presented a fourth report, dated April 27, 2007, which  
17 attempted to call into question the very existence of the excited delirium diagnosis. This  
18 was unforeseen to most involved but the arguments themselves are not supportable. (6-  
19 18-07 Kroll Report:18-21.) The National Association of Medical Examiners has  
20 recognized excited delirium for more than a decade. (6-18-07 Kroll Report: 21.)

21 Myers' attempts to deny the existence of excited delirium does not comport with  
22 his deposition testimony:

23 Q What is your understanding of the difference between excited delirium and  
24 agitated delirium?

25 A According to Di Maio and Di Maio's textbook on this subject, there's a  
26 definition of delirium that states on page 1 of their book that delirium is an  
27 acute tangent condition of altered cognition and consciousness. And when  
28 the person becomes violent and it becomes then --excuse me --an excited

1 delirium. That is their definition of excited delirium. The book proposes  
2 that there's a syndrome where patients with excited delirium actually then  
3 go on to die related to this scenario. Agitated delirium, in my  
4 understanding, is an older term that describes much the same type of  
5 behavior, both being delirious and agitated or combative. So it's my  
6 understanding that the excited delirium term though is the specific  
7 circumstances wherein -- under those circumstances the individual dies  
8 without an alternative explanation. So an agitated delirium person I guess  
9 would be combative, but survive, and an excited delirium individual would  
10 apparently succumb to his disorder. (Myers depo.: 23:10-24:8.)

11 Myers' testimony discussing the finer points of possible distinction between  
12 excited and agitated delirium contradicts his earlier position that excited delirium does  
13 not exist.

14 The evidence for excited delirium induced acidosis causing Mr. Heston's death  
15 is overwhelming. Ten defense experts — prominent in the areas of excited delirium,  
16 fibrillation, methamphetamine, and electrical effects on the body — have all concluded  
17 that Mr. Heston died of excited delirium. Dr. Deborah Mash was the expert chosen by  
18 the deputy medical examiner to test Mr. Heston's brain and Dr. Mash herself concluded  
19 that the brain test results were also consistent with a death from excited delirium. Dr.  
20 Vincent Di Maio who wrote the book and Dr. Charles Wetli who, with co-author Dr.  
21 Fishbain, coined the modern term in the early 1980s, have also concluded that Mr.  
22 Heston died from excited delirium. (4-6-07 Kroll Report:15.)

23 Myers argues that a single excited delirium diagnostic item (hyperthermia) was  
24 not present in Mr. Heston. (Myers depo.99:6-100:2.) Most of the experts in this case  
25 disagree with Myers on the hyperthermia question but even eliminating hyperthermia  
26 from the checklist, there still remains 11/11 diagnostic criteria fulfilled. This statistically  
27 still yields a probability ratio of 2,553 to 1 in favor of excited delirium. (6-18-07 Kroll  
28 Report:12).

1 In his 6-18-07 report, defense expert Kroll sets out a chart of excited delirium  
2 diagnostic checklist for Mr. Heston, with Myers only disagreeing on two points -  
3 clothing removal or hyperthermia and the brief quiet period before collapse. (6-18-07  
4 Kroll Report:13-14). To fully explore this issue, Dr. Kroll used a more complete  
5 checklist of 16 items. Giving every benefit to Myers' agreed-upon positions, there  
6 remain 13 of 15 criteria satisfied for a causation diagnosis of excited delirium. This  
7 yields a chi-square statistic of 13.393, which leads to a probability of 0.0002526 that Mr.  
8 Heston did not have excited delirium. This number inverts to an odds ratio of 3,959 to  
9 1 that Mr. Heston succumbed to drug induced excited delirium caused metabolic  
10 acidosis. (6-18-07 Kroll Report:15).

11 Myers had a very difficult task in trying to counter the overwhelming evidence  
12 for excited delirium; especially since he admits that he is not an expert in excited  
13 delirium. As admittedly not an ECD expert, Myers has failed to proffer one consistent  
14 theory which is supported by scientifically reliable and valid literature.

15 Myers' opinion rejecting excited delirium as the cause of Mr. Heston's death is  
16 not supported by the scientific evidence, and should be excluded.

17 **5. MYERS' CHANGING CAUSATION THEORIES DEMONSTRATE HIS**  
18 **INCONSISTENT OPINIONS.**

19 Myers' changing causation theories demonstrate another reason why Myers is not  
20 qualified to testify as an expert witness and his proffered expert opinions do not have  
21 adequate support. Myers' inconsistency is shown by his changes in causation theories  
22 with each report:

23 ///

24 ///

25 ///

26 ///

27 ///

28 ///

<u>Report Date</u>	<u>Ventricular fibrillation</u>	<u>Vasovagal</u>	<u>R h a b d o - myolysis</u>
11-28-06	Yes	No	Yes
1-2-07	Maybe (“need not have been”)	Introduced	Yes
3-11-07	Yes	Silent	Yes
4-27-07	“Unlikely”	Yes	Dropped

Myers has lacked one consistent theory supported by scientifically reliable and valid literature from the beginning.

While Myers may be a knowledgeable electrophysiologist, he is not an expert on the issues pertaining to this case. Myers is admittedly not an expert on the general aspects of ECDs and their effects and he is admittedly not an expert on general or specific causation as it applies to ECDs or this case.

*Daubert* requires that assertions be derived from "scientific knowledge." "Scientific" means proper grounding in the methods and procedures of science, or the "scientific method." "Knowledge" is more than subjective belief or unsupported speculation, but "applies to any body of known facts or to any body of ideas from such facts or accepted as truths on good grounds." *Daubert, supra*, 509 U.S. at 589-90. Expert testimony based on speculation rather than scientific knowledge is not admissible. *GE v. Joiner*, 522 U.S. 136, 146 (1997). Dr. Myers' opinions are not supported by the reasonable degree of medical certainty required under *Daubert*. Because causation must be based on scientific knowledge allowing for a reasonable degree of medical certainty rather than mere speculations or possibilities, the Court must

1 conclude that Dr. Myers' opinions do not satisfy the requirements of *Daubert*.

2 Based on Myers' inconsistency, lack of qualifications, and unsupported theories  
3 of causation, his expert opinions should be excluded.


4  
5 **6. CONCLUSION.**

6 Based upon the foregoing, Defendant TASER respectfully requests that the court  
7 exercise its "gatekeeper" responsibilities with regard to Myers' opinions regarding the  
8 issue of cause of death, in accordance with the *Daubert* standard of review and in  
9 compliance with the Federal Rules of Evidence Rule 702, and order *in limine* that  
10 Myers' opinions on causation are inadmissible at trial.

11 In the alternative, if the Court does not order *in limine* that Myers' opinions on  
12 causation are inadmissible at trial, Defendant TASER requests that a *Daubert* hearing  
13 be conducted before Myers is permitted to testify before the jury at the trial in this  
14 matter.

15 DATED: March 28, 2008

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17  
18 By:   
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