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12 **IN THE SUPREME COURT**  
13 **OF THE STATE OF ARIZONA**

14	STATE OF ARIZONA,	)	Supreme Court No.
15		)	_____
16	Plaintiff/Petitioner/ Appellant/Petitioner	)	Court of Appeals No. <b>2 CA-CV 2011-0197</b>
17		)	
18	vs.	)	
19	JOSEPH COOPERMAN,	)	Pima County Superior Court Cause No. CR 2011 7903
20		)	
21		)	Tucson City Court Cause No. TR 10061595
22	Defendant/Respondent/ Appellee/Respondent	)	
23		)	
24		)	<b>APPENDIX TO STATE'S PETITION FOR REVIEW</b>
25		)	
26	Real Party in Interest.	)	
27	_____	)	

1 THE STATE OF ARIZONA, by the undersigned Principal Assistant Prosecuting City  
2 Attorney, respectfully submits its Appendix to the State's Petition for Review, pursuant to the  
3 Arizona Rules of Civil Appellate Procedure, Rule 23(c).  
4

5 RESPECTFULLY SUBMITTED this 13<sup>th</sup> day of September, 2012.

6 STATE OF ARIZONA

7 /S/ \_\_\_\_\_  
8 William F. Mills  
9 Attorney for the State

10 The original was sent by E-filing  
11 this 13<sup>th</sup> day of September, 2012, to:

12 The Arizona State Supreme Court  
13 1501 W. Washington #402  
14 Phoenix, AZ 85007-3231

15 Copies were sent by mail, delivered, or e-mailed  
16 this 13<sup>th</sup> day of September, 2012, to:

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WFM/VRD/sb

Re: *State v. Cooperman*  
Appendix to Petition for Review  
Supreme Court No. \_\_\_\_\_  
Court of Appeals No. 2 CA -CV-2011-0197  
Pima County Superior Court No. CR 2011 7903  
Tucson City Court No. TR 10061595

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# **EXHIBIT # 1**

CITY OF TUCSON, AZ - CITATION



tlo  
28001894

County: PIMA  
City: TUCSON

Date/Time: 06/20/2010 02:29

**VIOLATOR**

First Name: JOSEPH Middle: AARON  
Last: COOPERMAN DOB: 12/08/1987  
Address: 6911 E DOUBLETREE RANCH RD Spanish Speaker: N  
City: PARADISE VALLEY State: AZ Zip: 85253  
Hgt: 5'07"" Eyes: BRN Origin: W  
Wgt: 140 Sex: M Hair: BRN  
DL#: D03046511 DL State: AZ Lic. Expires: 2052  
Endorsement: Military: N  
Restriction:  
Phone: Class: D  
Business Addr:  
City: State: Zip:  
Juvenile: N SSN: 600746119 Same as DL: N

**REGISTRATION**

Yr. Veh: 2004 Veh. Plate #: 528PBE  
Color: SIL Tag Expires: 06/2010 State: AZ  
Make: MITS Model: LANCER Style: 4D  
VIN: JA3AJ26E24U066661  
Reg. Owner Name:  
Reg. Owner Addr: 6911 E DOUBLETREE RANCH RD  
Same as Def: N

**LOCATION**

Upon a Public Street or Highway or Other Location Namely:

6TH  
EUCLID

Weather: CLEAR Time Conditions: NIGHT  
Traffic Conditions: LIGHT Lighting Conditions: STREET LIGHTS  
Direction of Travel: EAST Lane of Travel:  
Turn Lane:

**VIOLATIONS**

The undersigned says defendant did:  
Approx Speed: Posted Speed: Victims Rights:  
CMV: N Fatal: N Ser. Inj: N Hazmat: N Accident: N Victim: N DUI: Y  
IMPROPER POSITION; RIGHT TURN Type1: ARS  
28-751.1 Committed1: CIVIL TRAFFIC DV1: N  
DUI LIQUOR/DRUGS/VAPORS 1ST Type2: ARS  
28-1381A1 Committed2: CRIMINAL TRAFFIC DV2: N  
DUI LIQUOR AC .08+ Type3: ARS  
28-1381A2 Committed3: CRIMINAL TRAFFIC DV3: N  
Type4:  
Committed4: DV4: N  
Type5:  
Committed5: DV5: N

**COURT INFORMATION**

TUCSON CITY COURT  
103 E. ALAMEDA  
TUCSON AZ, 85701  
(520)791-4216

Appearance Date and Time: 06/30/2010 1:30 PM

SEE BOND CARD REFERENCE SANCTIONS

**SIGNATURE**

Signature of Defendant: x

Without admitting guilt, I promise to appear as directed in this complaint.

I certify that, upon reasonable grounds, I believe the defendant committed the above act(s) described, contrary to law, and have served a copy of this complaint upon defendant.

Complainant: : ENOS Officer ID: 46941  
Squad: : DUI80 Division: DUI  
Vehicle #: 280 Laser/Radar #:  
Case Number: 1006200091  
Supplement: N No Case Report: N  
Agency Name: TUCSON POLICE DEPARTMENT

**OFFICER NOTES**

**BACKUP OFFICER**

Officer Name:  
Officer ID:

# **EXHIBIT # 2**

COPY

1 MICHAEL RANKIN  
2 City Attorney  
3 Baird S. Greene  
4 Deputy City Attorney  
5 Criminal Division  
6 P.O. Box 27210  
7 Tucson, AZ 85726-7210  
8 791-4104

9 IN THE CITY COURT OF THE CITY OF TUCSON  
10 COUNTY OF PIMA, STATE OF ARIZONA

11	STATE OF ARIZONA,	)	
12		)	NO. 28001894
13	Plaintiff,	)	
14	vs.	)	DOCKET NO. 10061595
15		)	
16		)	MOTION IN LIMINE TO PRECLUDE
17		)	REFERENCE OR TESTIMONY RE
18	JOSEPH COOPERMAN,	)	BREATH-BLOOD CONVERSION,
19		)	PARTITION RATIOS, BREATH OR
20	Defendant.	)	BODY TEMPERATURE, BREATHING
21		)	PATTERNS, OR RFI
22		)	
23		)	(Judge Million)

24 COMES NOW the State of Arizona, by and through the undersigned Associate Prosecuting  
25 City Attorney, and respectfully moves this Court to preclude the defense from attempting to  
26 introduce testimony regarding the conversion of breath alcohol test results into corresponding blood  
27 alcohol concentrations, as well as any testimony or evidence regarding varying partition ratios used  
28 in the conversion of breath alcohol to blood alcohol, breath and/or body temperature, varying  
breathing patterns, and/or radio frequency interference ("RFI"). The State's motion is supported by  
the following Memorandum of Points and Authorities.

///

Office of the City Attorney  
Criminal Division  
103 E. Alameda, Suite 501  
Tucson, AZ 85701

1 MEMORANDUM OF POINTS AND AUTHORITIES

2 STATEMENT OF RELEVANT FACTS

3  
4 In the present case, Defendant agreed to submit to replicate breath tests, for the purpose  
5 of determining his breath alcohol concentration. Tucson Police Department (TPD) Officer Enos  
6 (#46941), using an Intoxilyzer 8000 instrument, administered Defendant's breath tests.  
7 Defendant's blood was never analyzed to determine blood alcohol concentration; nor is there any  
8 evidence of any abnormal breathing patterns (other than the anticipated testimony of the  
9 officer(s) that Defendant did not hold his breath, hyper- or hypoventilate just prior to the  
10 administration of the breath tests); nor any evidence that Defendant had an elevated breath  
11 and/or body temperature; nor any evidence that Defendant's breath tests results were affected by  
12 radio frequency interference.  
13

14 **I. ABSENT A SUFFICIENT FOUNDATIONAL SHOWING BY DEFENDANT,**  
15 **TESTIMONY REGARDING THE CONVERSION OF BREATH TO BLOOD**  
16 **THROUGH THE USE OF PARTITION RATIOS FOR THE 28-1381(A)(1)**  
17 **CHARGE AND PRESUMPTIONS IS IRRELEVANT.**

18 Ariz. Rules of Evid., Rule 402 states that:

19 All relevant evidence is admissible, except as otherwise provided  
20 by the Constitution of the United States, by the Constitution of  
21 Arizona or by applicable statutes or rules. Evidence which is not  
22 relevant is not admissible.

23 It is in this connection that the court in *Guthrie v. Jones*, 202 Ariz. 273; 43 P.3d 601  
24 (App. 2002) reviewed the subject of partition ratios and held that: "In a per se DUI prosecution  
25 under A.R.S. § 28-1381(A)(2), evidence of variation in individual partition ratios is irrelevant  
26 and inadmissible." *Id.* at 277. And, while a defendant might overcome this relevancy hurdle in  
27  
28

1 a "traditional" DUI prosecution under A.R.S. § 28-1381(A)(1), there is one rather critical  
2 element that must be present as recognized by the *Guthrie* court:

3  
4 In a traditional DUI prosecution under § 28-1381(A)(1), however, when the State  
5 uses breath test results to take advantage of the § 28-1381(H) (now §  
6 28-1381(G)) presumption, partition ratio evidence *may* be relevant to rebut that  
7 presumption and thus admissible.  
8 *Id.* (Emphasis added.)

9 Thus, partition ratio arguments or defenses only become relevant and admissible, in  
10 considering the charge under A.R.S. § 28-1381(A)(1), if and only if the State seeks to take  
11 advantage of the presumption; such arguments and defenses are never relevant or admissible  
12 when considering the charge under either A.R.S. §28-1381(A)(2) or A.R.S. §1382.

13 Moreover, the *Guthrie* court maintained - with respect to a § 28-1381(A)(1) charge and  
14 presumptions - that only "evidence that a *particular defendant's ratio is significantly greater* is  
15 relevant, for it would have a tendency to rebut the presumption that the defendant was 'under the  
16 influence' at a certain breath alcohol concentration." *Id.* (Emphasis added.) See also Ariz. R.  
17 Evid. 401 (evidence is relevant if it has "any tendency to make the existence of any fact that is of  
18 consequence to the determination of the action more probable or less probable than it would be  
19 without the evidence"). Therefore, unless Defendant produces evidence that his partition ratio  
20 differs from the stational population norm of 2100 to 1, this Court should preclude any  
21 introduction of partition ratio evidence, pursuant to *Guthrie*.

22  
23 **II COMPARISONS BETWEEN BREATH AND BLOOD VALUES ARE**  
24 **IRRELEVANT AND SHOULD BE PRECLUDED.**

25 The Department of Public Safety defines alcohol concentration in terms of "grams of  
26 alcohol per 100 milliliters of blood" or "grams of alcohol per 210 liters of breath." Department  
27 of Public Safety, Arizona Administrative Code R9-14-401, 9 A.A.C. 14. The clear and  
28

1 unambiguous wording of the code indicates there are two equally viable methods to measure a  
2 suspect's alcohol concentration. In this case, the Defendant submitted to breath tests. The Rules  
3 of Evidence clearly state, "(a)ll relevant evidence is admissible, except as otherwise provided by  
4 the Constitution of the United States, by the Constitution of Arizona or by applicable statutes or  
5 rules. And as previously referenced above, Evidence which is not relevant is not admissible."  
6 Ariz. Rules of Evid., Rule 402. Rule 401 states "relevant evidence" is admissible if it tends to  
7 prove or disprove a fact in issue. 17A A.R.S. Rules of Evid., Rule 401. It is in this regard that a  
8 comparison between blood and breath runs afoul of the relevance test - the Defendant's blood  
9 alcohol concentration is not at issue; and thus any evidence presented about the difference  
10 between breath alcohol concentration (BrAC) and blood alcohol concentration (BAC) is  
11 irrelevant and should be precluded.

12  
13  
14 **III. GENERAL VARIABILITY OF INDIVIDUAL CHARACTERISTICS IS NOT**  
15 **RELEVANT AND SHOULD BE EXCLUDED.**

16 Several factors can affect the accuracy of the test results: random error, radio frequency  
17 interference, mouth alcohol, chemical interferants, insufficient alveolar sample, and operator  
18 error. *State ex rel. Dean v. City Court of City of Tucson*, 163 Ariz. 510, 789 P.2d 180 (Ariz.  
19 1990). However, as the Court of Appeals held in *Guthrie*, evidence on variations in partition  
20 ratios, the ratio of alcohol in a person's breath translated into the amount of alcohol in a person's  
21 blood, was irrelevant and inadmissible in a prosecution under A.R.S. §28-1381(A)(2). *Guthrie*,  
22 202 Ariz. at 276, 43 P.3d at 605 (App. 2002).

23  
24  
25 Moreover, the general variability of partition ratio in the population, without more,  
26 makes no fact in issue either more or less probable, as required by Ariz. Rules of Evid., Rule  
27 401. Without a foundational showing of Defendant's particular partition ratio, the jury will not  
28

1 be able to form any informed opinion as to whether Defendant's partition ratio is greater or  
2 lesser than presumed, and will have to improperly base its verdict on speculation. *See Acuna v.*  
3 *Kroack*, 212 Ariz. 104, 128 P.3d 221 (App.2006) (Reversal is required when a jury's verdict is  
4 supported by nothing beyond speculation, suspicion, and bottomless inference.).  
5

6 Further, the Court indicated that this type of individual characteristic testimony "may" be  
7 relevant to the DUI charge under A.R.S. § 28-1381(A)(1) "when the State uses breath test results  
8 to take advantage of the § 28-1381(H) (now § 28-1381(G))." *Id.* at 276. If the State elects to  
9 use the presumption, then "evidence that *a particular defendant's ratio is significantly greater* is  
10 relevant, for it would have a tendency to rebut the presumption that the defendant was 'under the  
11 influence' at a certain breath alcohol concentration. *Id.* (Emphasis added.) Thus, evidence of this  
12 Defendant's partition ratio at the time of the breath tests, if known, would be relevant only as to  
13 the § 28-1381(A)(1) charge.  
14  
15

16 The Court of Appeals further clarified its reasoning in *Storholm. State v. Storholm*, 210  
17 Ariz. 199, 109 P.3d 94 (App. 2005). *Storholm* challenged his conviction for Aggravated DUI  
18 arguing that *Guthrie* made it impossible for him to rebut the breath evidence collected against  
19 him. *Id.* The Court stated that *Guthrie* "does not stand for the proposition that evidence of blood  
20 alcohol concentration by itself is irrelevant in a prosecution under A.R.S. § 28-1381(A)(2) using  
21 breath alcohol concentration." *Id.* at 201. Rather, the Court reemphasized its holding in *Guthrie*  
22 stating, "[b]ecause A.R.S. § 28-101(2) (Supp.2004) permits alcohol concentration to be shown  
23 either by breath or blood, we held that it is irrelevant in a prosecution under A.R.S. §  
24 28-1381(A)(2) whether the defendant's partition ratio at the time of the breath test varied from  
25 the standard 2100:1 ratio because of individual idiosyncracies or environmental factors." *Id.*  
26  
27  
28

1 Accordingly, it is only if and when the State requests the presumption, that the  
2 Defendant is entitled to have the jury consider *his particular partition ratio*, and only as to the  
3 DUI charge under A.R.S. § 28-1381(A)(1).  
4

5 **IV EVEN THAT WHICH IS RELEVANT MAY BE EXCLUDED IF ITS**  
6 **PROBATIVE VALUE IS OUTWEIGHED BY THE DANGER OF CONFUSION**  
7 **OF THE ISSUES OR MISLEADING THE JURY**

8 In determining the issue of considering certain factors, this Court is not bound to cease  
9 its inquiry at the line of relevancy and admissibility; rather, the provisions of Rules 401 and 402  
10 are tempered by Rule 403. In relevant portion the Rule provides that "evidence may be excluded  
11 if its probative value is substantially outweighed by the danger of .... confusing of the issues,  
12 misleading the jury." While competent evidence that a particular defendant's ratio is greater may  
13 be relevant, pursuant to *Guthrie*, the probative value of any other evidence, such as a  
14 "hypothetical" person, is substantially outweighed by the danger of misleading the jury and  
15 confusing the issues. However, it is important to note that the *Guthrie* court used the words  
16 "particular" and individual" rather than the words "a" or "any" in addressing the issue of  
17 relevancy; and it is thus that logic dictates that a defendant who wishes to challenge the  
18 "standard" or "generally accepted" 2100:1 ratio on which the Intoxilyzer (5000 or 8000) is  
19 based, must present evidence of her own partition ratio at the time of the test.  
20  
21

22 In addition, the opinion in *Guthrie* offers guidance when other types of general  
23 variability evidence are offered, for the purpose of calling into question the breath test results.  
24 For example, it is anticipated that counsel for Defendant will touch upon breath and/or body  
25 temperature, as well as breathing patterns, and their varied effects upon breath testing and more  
26 particularly the Intoxilyzer, in questioning a proffered defense expert and/or criminalist from the  
27  
28

1 Tucson Police Department Crime Lab. However, the application of the relevancy Rules and  
2 *Guthrie* to these factors requires that such testimony not be offered, unless there is evidence of  
3 the individual Defendant's temperature and/or breathing patterns at the time of the test. See  
4 Ariz. Rules Evid. 401 and 403; See also *Guthrie, supra*. Similarly, any testimony or argument  
5 that radio frequency interference (RFI) "could" affect breath test results should be precluded,  
6 unless there is specific evidence in this case that Defendant's tests were affected by RFI.  
7

8 **CONCLUSION**

9  
10 Accordingly, the State respectfully requests that any testimony regarding partition ratios  
11 be precluded as to the BrAC charge under § 28-1381(A)(2). Additionally, if the State does not  
12 request the presumptions pursuant to § 28-1381(G) as to the DUI charge, under A.R.S. §  
13 28-1381(A)(1), any testimony regarding partition ratios should be precluded. Even if the State  
14 requests the presumptions, without evidence of the Defendant's particular partition ratio, at the  
15 time of the breath tests, any testimony regarding partition ratios as it relates to the DUI charge  
16 pursuant to § 28-1381(A)(1) should be precluded.  
17

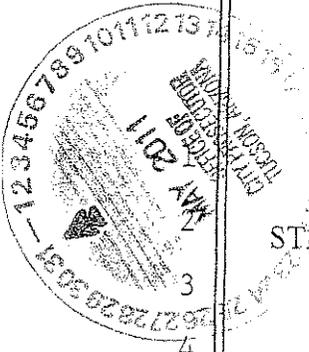
18 Lastly, without evidence that RFI affected the Defendant's particular breath test results,  
19 or evidence of the Defendant's temperature and/or breathing patterns at the time of the test, any  
20 testimony regarding these factors should be precluded.  
21

22 RESPECTFULLY SUBMITTED this 20<sup>th</sup> day of May, 2011.

23 STATE OF ARIZONA

24  
25 By Rebecca Strickland  
26 Rebecca Strickland  
27 Attorney for the State  
28

# **EXHIBIT # 3**



IN THE CITY COURT FOR THE CITY OF TUCSON  
COUNTY OF PIMA, STATE OF ARIZONA

STATE OF ARIZONA,

Plaintiff,

JOSEPH COOPERMAN,

Defendant.

NO. TR-10061595

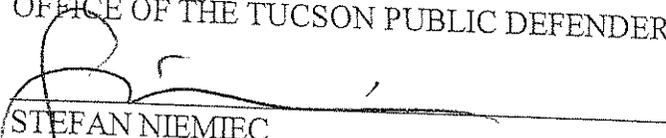
RESPONSE TO STATE'S MOTION IN  
LIMINE TO PRECLUDE REFERENCE  
OR TESTIMONY RE: BREATH-BLOOD  
CONVERSION, PARTITION RATIOS,  
BREATH OR BODY TEMPERATURE  
BREATHING PATTERNS, OR RFI

(Assigned to Judge Million)

The Defendant, Joseph Cooperman, by and through undersigned counsel, respectfully moves this Court to **deny** the State's motion *in limine* to preclude him from introducing testimony regarding breath/blood conversion, partition ratio, breath and/or body temperature, varying breathing patterns, and/or radio frequency interference. Defendant's response is supported by the following Memorandum of Points and Authorities.

RESPECTFULLY SUBMITTED this 26<sup>th</sup> day of May, 2011.

OFFICE OF THE TUCSON PUBLIC DEFENDER

  
STEFAN NIEMIEC  
Supervising City Public Defender  
Attorney for Defendant  
(520) 791-4857

Copy of the foregoing,  
delivered this 26<sup>th</sup> day  
of May, 2011 to:  
CITY PROSECUTOR'S OFFICE  
103 E. Alameda, Suite 501  
Tucson, Arizona 85701  
Attorneys for the State

City of Tucson Public Defender  
103 E. Alameda, Suite 601  
Tucson, Arizona 85701  
(520) 791-4857  
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City of Tucson Public Defender  
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MEMORANDUM OF POINTS AND AUTHORITIES

FACTS:

The Defendant was stopped by Tucson Police Department Officer Enos on June 20, 2010. During the investigation, Officer Enos elected to administer breath alcohol tests with an Intoxilyzer 8000. There is no evidence that Officer Enos took Mr. Cooperman's temperature. There was no evidence documenting Mr. Cooperman's breathing patterns. There was no evidence to rule out that there was not some level of RFI on that date. The Defendant was thereafter charged with DUI under A.R.S §§28-1381(A)(1) and (A)(2).

LEGAL ANALYSIS:

**I. EVIDENCE PRESENTED REGARDING THE DIFFERENCE BETWEEN BREATH AND BLOOD ALCOHOL CONCENTRATION, PARTITION RATIO, BREATH/BODY TEMPERATURE, BREATHING PATTERN, OTHER PHYSIOLOGICAL VARIABLES AND RADIO FREQUENCY INTERFERENCE IS ALWAYS RELEVANT AND THEREFORE ADMISSIBLE UNDER ARIZONA RULES OF EVIDENCE 401 & 402; ANY PRECLUSION OF SUCH EVIDENCE VIOLATES DUE PROCESS**

Arizona Rules of Evidence 402 states that in a criminal proceeding,

“all relevant evidence is admissible, except as otherwise provided by the Constitution of the United States, by the Constitution of Arizona, or by applicable statutes or rules. Evidence which is not relevant is not admissible.”

Arizona Rules of Evidence 401 defines relevance as follows:

“relevant evidence means evidence having any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence.”

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In the present case, because Officer Enos administered a breath alcohol test on the Defendant, and Arizona uses the partition ratio system to translate those results, comparisons between breath alcohol concentration and blood alcohol concentration are always relevant and therefore admissible under the Rules. Defendant does not contest that partition ratio is not relevant regarding the §28-1381(A)(2) according to *Guthrie v. Jones*, 202 Ariz. 273, 43 P.3d 601 (2002). With respect to breath testing, it is clear that Arizona adopted a measurement of grams of alcohol/210 liters of breath. *Id.* at 274-5 and §28-101(2)(b). However, partition ratio is always relevant on the (A)(1) charge because it directly speaks to whether or not someone is impaired and whether or not someone is under the influence.

As explained in further *Guthrie v. Jones*, "partition ratios translate the amount of alcohol in a person's breath into the amount of alcohol in a person's blood." 202 Ariz. 273, 274, 43 P.3d 601, 602 (2002). The reason the breath-to-blood relationship cannot be ignored is explained plainly by the *Guthrie* court:

**Alcohol in the breath does not cause impairment; impairment results when alcohol enters the body, is absorbed into the bloodstream, and is transported to the central nervous system and the brain. Although it is thus a blood alcohol reading, not a breath alcohol reading, that establishes whether a person is impaired, breath alcohol readings nonetheless indicate blood alcohol levels....**

*Id.* (emphasis added).

The fact that officers choose to administer a breath test because it is easier and less intrusive does not change the physiological purposes behind the test.

Likewise, body temperature, breathing patterns and other physiological variables above and beyond partition ratio are relevant regarding the accuracy of the reading and the

1 (A)(2) charge as well the (A) (1) because they apply at all times. First, these variables do not  
2 disappear into thin air because there is no specific evidence of the Defendant's body or breath  
3 temperature or partition ratio. They apply every single time the breath test is done. To  
4 preclude such evidence without "specific" information of the Defendant's temperature,  
5 breathing pattern, partition ratio or other physiological variables violates due process because  
6 it prevents him from providing evidence about how the machine even works. To conclude  
7 otherwise would suggest that all humans have exactly the same temperature, partition ratio,  
8 breathing pattern, etc. at the time they are testing. This is scientifically unsound and  
9 completely illogical. *See State v. Hanks*, 772 A.2d 1087, 1088 (Vt. 2001) for a discussion of  
10 partition ratio (relied upon by the *Guthrie* court).  
11

12 Second, there is absolutely no language in *Guthrie v. Jones* that precludes discussion  
13 of these variables where there is no specific evidence of the Defendant's temperature,  
14 breathing pattern or RFI.  
15

16 Third, **due process** provides a defendant the opportunity "to offer expert testimony to  
17 **show for one reason or another** that test results of .10% or higher (*now .08% or higher*) do  
18 not prove, beyond a reasonable doubt, that the level at the time of driving was in excess of  
19 that proscribed." *Fuenning v. Superior Court In and For Maricopa County*, 139 Ariz. 590,  
20 599, 680 P.2d 121, 129, (1983) (emphasis added).  
21

22 Moreover, a "defendant may attack the accuracy of a breathalyzer **on any relevant**  
23 **ground**, including the inherent margin of error." *State ex rel. McDougall v. Superior Court*  
24 *In and For County of Maricopa*, 178 Ariz. 544, 546, 875 P.2d 203, 205 (1994) (emphasis  
25 added). This would logically include partition ratio, breath/blood conversion, breath and/or  
26

1 body temperature, varying breathing patterns, other physiological variables and/or radio  
2 frequency interference.

3 **II. REQUIRING THE DEFENDANT TO PROVE SPECIFIC EVIDENCE**  
4 **IS IMPROPER BURDEN SHIFTING**

5 The State has the burden to prove the impairment and alcohol concentration  
6 charges beyond a reasonable doubt. The Defendant is not even required to provide  
7 evidence. Requiring the Defendant to provide specific evidence of these variables,  
8 which affect every since breath test, is not only scientifically disingenuous, but is an  
9 improper shift of the burden of proof to the Defendant. Is the State actually requiring  
10 a defendant to obtain an arterial blood sample to even discuss the partition ratio?  
11 That is not what Arizona Statutes require, nor is it what *Guthrie v. Jones* requires.

12 **III. THE PROBATIVE VALUE OF COMPARING BREATH ALCOHOL**  
13 **CONCENTRATION AND BLOOD ALCOHOL CONCENTRATION IS**  
14 **NOT SUBSTANTIALLY OUTWEIGHED BY ANY PREJUDICIAL OR**  
15 **OTHER CONCERNS AND THEREFORE NOT EXCLUDED BY**  
16 **ARIZONA RULES OF EVIDENCE 403**

17 Rule 403 states the following:

18 “although relevant, evidence may be excluded if its probative  
19 value is substantially outweighed by the danger of unfair  
20 prejudice, confusion of the issues, or misleading the jury, or  
21 by considerations of undue delay, waste of time, or needless  
22 presentation of cumulative evidence.”

23 In the present case, the probative value of presenting expert testimony comparing  
24 breath and blood alcohol concentration is not substantially outweighed by any of the above-  
25 listed concerns. As previously discussed, these variables apply at all times. If the State has  
26 specific evidence of one of the variables and can offer that, that would be evidence for the

1 jury to consider. Likewise, if they do not, the jury should still be able to consider the  
2 variable. It is a variable that applies to breath testing at all times. It does not mislead or  
3 confuse the jury. “[R]esults of a test...which are subject to other factors creating  
4 scientific inaccuracy may leave a reasonable doubt of guilt. These are evidentiary  
5 problems for the fact finder.” *Fuening*, 680 P.2d 121, 129 (emphasis added).  
6 Furthermore, “The defendant may offer testimony to show that the test results . . . do not  
7 prove, beyond a reasonable doubt, that the level at the time of driving was in excess of that  
8 proscribed.” *Id.*

9  
10 The State suggests in §§ III and IV of its Motion in Limine that *Guthrie* stands for the  
11 proposition that Mr. Cooperman must introduce specific evidence regarding his own partition  
12 ratio, temperature, breathing pattern, etc. The State contends that “general variability of the  
13 population” regarding these different factors is irrelevant, and if relevant, too prejudicial.  
14 This is a flatly incorrect interpretation of *Guthrie*. First, *Guthrie* only suggests that is “[o]ne  
15 means. . . . is to establish that the defendant’s individual partition ratio differed from the  
16 standard 2100:1 ratio to a significant degree.” *Id.* at 276. The *Guthrie* court did not preclude  
17 a defendant from introducing studies or other evidence about variations in the population. In  
18 fact, *Guthrie* **directly** relies on a Vermont Supreme Court decision stating that preclusion of  
19 evidence from eliciting testimony regarding “variations as a general matter in the human  
20 population” in partition ratios was reversible error. *See State v. Hanks, infra* at 94, 101. The  
21 Court in *State v. Hanks* said it best:  
22  
23

24 **We fail to see how such evidence would be confusing to the jury or**  
25 **unduly prejudicial to the State; to the contrary, not allowing defendants**  
26 **to reveal these scientifically recognized facts would make it difficult, if**

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not impossible, for a defendant to challenge a test result that is admissible in generic DWI prosecutions only as a permissive inference on the ultimate question of impairment. Accordingly, we conclude that the district court abused its discretion in determining that such testimony would be unduly prejudicial and confusing.

*State v. Hanks*, 172 Vt. at 100-101 (emphasis added).

**IV. A.R.S. §28-1381(H) PERMITS THE INTRODUCTION OF ANY COMPETENT EVIDENCE THAT RELATES TO THE QUESTION OF WHETHER THE DEFENDANT WAS UNDER THE INFLUENCE OF INTOXICATING LIQUOR**

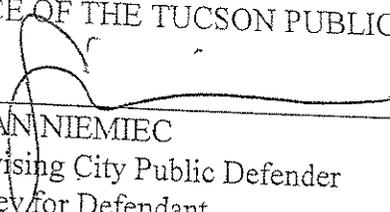
The State contends that *Guthrie v. Jones* stands for the proposition that the presumption language under A.R.S. §28-1381(G) can only be invoked by the State. However, the language from *Guthrie* is simply that “[t]he State may elect, however, to establish alcohol concentration in order to take advantage of a statutory presumption.” *Guthrie* at 276. There is absolutely nothing in *Guthrie v. Jones* precluding the use of the presumption language under A.R.S. §28-1381(G) by the Defendant. Likewise, there is absolutely nothing in *Guthrie* precluding discussion by Defendant of partition ratio on the (A)(1). Furthermore, Subsection H of A.R.S. §28-1381 expressly states that Subsection G does not limit the introduction of any other competent evidence bearing on the question of whether or not the Defendant was under the influence of intoxicating liquor. This would logically include evidence relating to body/breath temperature, breathing patterns, regurgitation of alcoholic stomach contents, phase of alcoholic metabolism, or other such competent evidence.

CONCLUSION

The State misinterprets *Guthrie* in its Motion in Limine. Defendant asks this Court to deny the State's Motion in Limine and asks the Court to allow all evidence and testimony about partition ratio regarding the (A)(1) charge, and breathing pattern, body temperature, other physiological variables and radio frequency interference on the (A)(1) and (A)(2) charges even if the Defendant does not provide specific evidence of his own variables at the time of breath testing. The State is trying to do exactly what the State of Vermont did in attempting to preclude evidence regarding "variations as a general matter in the human population." This is reversible error and was acknowledged as such by the *Guthrie* court.

RESPECTFULLY SUBMITTED this 26<sup>th</sup> day of May, 2010.

OFFICE OF THE TUCSON PUBLIC DEFENDER

  
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Supervising City Public Defender  
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Copy of the foregoing  
delivered this 26<sup>th</sup> day  
of May, 2010 in Court to:  
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# **EXHIBIT # 4**

IN THE CITY COURT OF THE CITY OF TUCSON  
COUNTY OF PIMA, STATE OF ARIZONA

STATE OF ARIZONA,

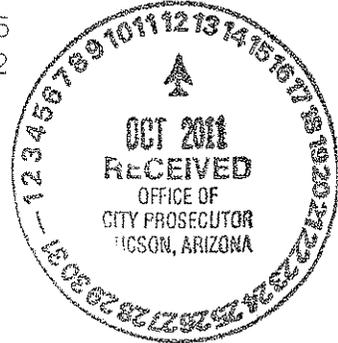
Plaintiff,

vs.

JOSEPH COOPERMAN  
HEATHER GRIFFIN

Defendants.

NO. TR-10061595  
TR-10081122



BEFORE: HON. WENDY MILLION

APPEARANCES: WILLIAM MILLS  
Assistant City Attorney  
For the Plaintiff

STEFAN NIEMIEC  
City Public Defender  
For Defendant Joseph Cooperman

RUSSELL HUGHES  
City Public Defender  
For Heather Griffin

JAMES NESCI  
JOSEPH ST. LOUIS  
Attorneys at Law  
For Defendants by Association

TRANSCRIPT OF PROCEEDINGS

PENDING MOTIONS

August 16, 2011

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THE COURT: I see the players changed here.

MR. MILLS: I have an objection to that. As far as I understand, the Public Defender is representing Mr. Cooperman and Mr. (sic) Griffith and I don't believe Mr. Nesci represents either of those two people, so I'm a little puzzled as to why the change in counsel.

THE COURT: All right. Let's go on the record here. Because I have this as State of Arizona versus Joseph Cooperman and State of Arizona versus Heather Griffin, TR-10061595, and that's Cooperman, and then TR-10081122. And Mr. Mills was speaking for the State there.

Mr. Niemiec.

MR. NIEMIEC: Yes, Your Honor. Because this is an issue of statewide importance, Mr. Nesci and Mr. St. Louis have filed notice of special association on this case on this specific issue for this hearing.

THE COURT: Well, and I know that they agreed with Judge Berning that they would use the transcript of this, correct, in one case they have in front of Judge Berning. Mr. Nesci, is that true?

MR. NESCI: Yes.

THE COURT: Mr. St. Louis, Ms. Bynum agreed,

1 yes.

2 MR. ST. LOUIS: Ms. Bynum agreed, yes.

3 THE COURT: I don't know.

4 MR. ST. LOUIS: It wasn't one of us. It was  
5 her. But she works for us. It's okay.

6 THE COURT: So --

7 MR. MILLS: Yeah.. I don't see under Rule 6  
8 there's a thing of association where it substitutes for the  
9 attorneys representing these two people. They don't  
10 represent these two individuals. They represent people in  
11 other cases. And in those other cases they might agree to  
12 accept the transcripts in these hearings. They're not the  
13 attorneys of record for these two defendants. The Public  
14 Defender has been appointed. They represent them. So it  
15 seems to me where we left off last time we were in this  
16 courtroom the Public Defender represents Mr. Griffith (sic)  
17 and Mr. Cooperman. They're the only ones that can proceed  
18 in this matter at this time.

19 THE COURT: Mr. Nesci.

20 MR. NESCI: Your Honor, Mr. Mills is  
21 mischaracterizing this. He's asking, he's saying that it's  
22 a substitution of counsel. It's not a substitution of  
23 counsel. It's an association of counsel. And there's big  
24 difference between those two things.

25 And, Your Honor, out of the kindness of our

1 hearts and Nesci and St. Louis we have decided to help out  
2 the Public Defender's agency, which is strapped for cash,  
3 certainly as every other agency in this state is. And, I  
4 don't see how Mr. Mills can even have standing to object to  
5 who should represent somebody at some point in time. That  
6 is something that the City Prosecutor's Office has nothing  
7 to do with.

8 THE COURT: Well, I gave him money for experts  
9 and since most of them are in the room, I don't think  
10 they're probably like under-manned or something, Mr. Nesci,  
11 so I'm not real convinced by your helping them out.

12 But I don't see that -- I'm not sure that, Mr.  
13 Mills, you have a right to object. I suppose if they  
14 wanted to file like a limited appearance or something --

15 MR. HUGHES: Your Honor, I'd be happy to.  
16 (Inaudible) associate with anybody.

17 THE COURT: If both defense attorneys don't  
18 have, both Public Defenders don't have a problem with that,  
19 then I don't have a problem with it.

20 One of you going to speak, though? I hope not  
21 both of you.

22 MR. NESCI: Oh, I'm doing the examinations. I  
23 mean --

24 MR. ST. LOUIS: We have done this a few times.

25 MR. NIEMIEC: Your Honor, just for the record,

1 Mr. Hughes and I are filing just a notice of supplemental  
2 authority. As we had discussed before back on July 28th,  
3 that the case that we had cited we just want to --

4 THE COURT: It is not real clear in your  
5 motions, but that's now what you're --

6 MR. NIEMIEC: Yeah, and it's -- and what we want  
7 to make sure that that was in the record that we were  
8 citing to People v. Van Gelder back on July 28th and we  
9 wanted to at least provide a copy to the State and for the  
10 Court.

11 THE COURT: All right. Mr. Mills, I assume --  
12 well, tell me how you feel about this.

13 MR. MILLS: Just asked me to respond to whatever  
14 that is. I've never seen the actual case before so I  
15 appreciate we finally have a copy. I'm not sure where that  
16 leads, but if we can read that and respond appropriately, if  
17 the Court will give us time to do that.

18 THE COURT: I will. In that, basically, the --  
19 did you raise this --

20 MR. HUGHES: May I interject. I think the case  
21 was peddled out the last time we were in court.

22 THE COURT: Oh, that's what I was trying to  
23 remember. Did we raise it just when we had Ms. Strickland  
24 in here or did we raise it --

25 MR. HUGHES: Yeah. I actually gave a copy to

1 the State back on July 28th --

2 THE COURT: So it was before we had the  
3 discussion --

4 MR. HUGHES: Before Mr. Mills had actually come  
5 into the, to be on the case.

6 THE COURT: Okay.

7 MR. HUGHES: That's correct.

8 THE COURT: And they did give me this California  
9 case, Mr. Mills, which I think is, directly talks about the  
10 other factors basically.

11 MR. MILLS: Right.

12 THE COURT: So I'll certainly give the State  
13 time to file --

14 MR. MILLS: Thank you.

15 THE COURT: -- a response, but let's take all  
16 the evidence today.

17 All right. So it's the State's motion. Now, can  
18 I just -- now, maybe I'm oversimplifying it, but let me  
19 tell you what I think we're talking about.

20 Is everyone agreeing that partition ratio is not  
21 admissible on (A)(2) because that's what whatcha magiggie  
22 says?

23 MR. NESCI: Guthrie.

24 THE COURT: What?

25 MR. NESCI: Guthrie v. Jones.

1 THE COURT: Yes. Guthrie.

2 MR. NESCI: That would be the case, Judge.

3 THE COURT: All right. So everybody agrees that  
4 we're not talking about just the partition ratio on (A)(2).

5 MR. NESCI: Right.

6 THE COURT: And the State wants to limit  
7 partition ratio and all the other factors on (A)(1) and  
8 (A)(2). Partition ration on (A)(1) and all the other  
9 things that the experts talk about, its variables,  
10 hypothetical variables, quote, unquote, on (A)(1) and  
11 (A)(2); is that correct, Mr. Mills?

12 MR. MILLS: It is correct unless they were  
13 actually produced, as I think Guthrie said, specific  
14 information that, to their specific defendant they have  
15 information as to what his breathing pattern was, his  
16 breath temperature, his blood consistency, any of the  
17 variables they want to introduce. If they have the  
18 foundation on their particular defendant they have such  
19 evidence, then they could proceed.

20 THE COURT: All right. So part of the State's  
21 argument is, to me, an interpretation of the case law.  
22 Whether Guthrie actually says it has to be that defendant's  
23 whatever variable, that's part one. Part two is that, I  
24 think probably I'm going to hear some testimony about  
25 whether these other things are maybe related to partition

1 ratio; is that correct?

2 MR. MILLS: Yes. That they are within the  
3 context. As Guthrie said partition ratio has these factors  
4 within it and then they list a very lengthy, as is quoted  
5 in Guthrie, as was quoted in the Gasper (ph) decision from  
6 Judge Godoy also repeated those.

7 THE COURT: Okay.

8 MR. NESCI: I think a lot of this is going to  
9 depend on how you go ahead and define partition ratio. The  
10 State is trying to define partition ratio as all-  
11 encompassing. And, in fact, their motion even includes  
12 radio frequency interference as something that the defense  
13 cannot get into in a motion in limine.

14 THE COURT: Okay.

15 MR. NESCI: They're expanding the definition of  
16 what it is. Now, I do think that the defense can use,  
17 certainly under Guthrie, the partition ratio on the (A)(1)  
18 charge and I think we all agree on that. And that's  
19 certainly when the State asks for the presumptions. But  
20 also the defense should be able to ask for the presumption  
21 as well in order to use the partition ratio in that  
22 particular instance --

23 THE COURT: All right.

24 MR. NESCI: -- because it's a defense that  
25 should not be available -- shouldn't be allowed as a sword

1 to the defense, to the prosecution without equally  
2 providing a shield to the defense.

3 THE COURT: All right. Well, I don't know if  
4 Mr. Nesci saw my draft opinion, but --

5 MR. MILLS: Let me ask on that point. What does  
6 the defense mean when they say they can ask for the  
7 presumption too? Is the defense going to ask for the .08  
8 and above presumption of intoxication?

9 THE COURT: That's what they --

10 MR. MILLS: Or is the defense going to ask for  
11 the .05 and below presumption of non-intoxication? Which  
12 are they going to ask for?

13 THE COURT: All right. Well --

14 MR. MILLS: It was unclear about where, what our  
15 parameters are here. Because I have two different  
16 arguments depending on what the answer is to those two  
17 possibilities and I don't know which, which is before us.

18 THE COURT: Well, let me ask you this. Is this  
19 -- if that part of it to me is a case law interpretation --

20 MR. NESCI: Sure.

21 THE COURT: -- also, correct?

22 So if we talk about, you know, who gets to have  
23 the presumption and what the presumption is, I think that's  
24 an interpretation of the case law. Just like I think that  
25 whether or not you get to introduce hypothetical whatever

1 these variables are is an interpretation of the case law.

2 Today, I mean, I will let you all argue that, but  
3 I think today we've got both experts here already in court.  
4 Let's get to the second question, which is what's partition  
5 ratio and what's not, because I think that's the language  
6 that Guthrie talks about and so I think that part of my job  
7 is going to be deciding whether or not all these other  
8 things fall into what Guthrie limits. Does that sound  
9 fair? And to me that's what we need expert testimony  
10 about.

11 MR. MILLS: My understanding of Guthrie is that  
12 unless the State asks for a .08 presumption of impairment  
13 in the (A)(1) charge, that none of this comes in.

14 THE COURT: Well, you're not committing me to  
15 that.

16 MR. MILLS: Right. No, I'm just saying that's  
17 the State's view so far. The defense view is as long as  
18 there is an (A)(1) charge that can any of these factors  
19 come in; is that what --

20 THE COURT: I think the defense view is that  
21 they get to have it in and they get to have everything but  
22 partition ratio, whatever we decide that is, on the (A)(2)  
23 charge, too; is that correct, Mr. Nesci?

24 MR. NESCI: You have it exactly right, Your  
25 Honor. And I do need to correct Mr. Mills. Guthrie does

1 not say unless. The Guthrie case says if. If the State  
2 asks for the presumption. It doesn't say unless. If it  
3 said unless, I agree. It would be limiting us. But it  
4 doesn't. It says if. And because it says if and doesn't  
5 say and the defense may not, we get to use it anytime we  
6 want.

7 MR. MILLS: Well, here are the two points I want  
8 to make on the record. One is the defense, I don't  
9 believe, can ask for the .08 presumption. That is the  
10 State deciding how it's going to present its case. They  
11 can either ask for it or not ask for it. That's a  
12 prosecutorial function. If they want to have the exclusion  
13 of the partition ratio and the other variable factors that  
14 go into the partition ratio, then they have to forgo asking  
15 for the presumption under 28-1381(G), I guess it is, about  
16 if you are at a .08 or greater, then in the (A)(1)  
17 impairment charge you are presumed to be impaired. And  
18 Guthrie tells the State you have to make a choice. If you  
19 want to ask for that, then all these other factors will  
20 come in. If you don't ask for it, then they stay out and  
21 that includes the (A)(1) charge because it's on the (A)(1)  
22 charge. That is the way I see it. They are not in a  
23 position to ask for how the State's going to present its  
24 case and introduce .08. That's for the State. That's not  
25 in favor of the defendant.

1           If what I thought they were doing was asking for  
2 the .05 and under presumption, because that's in their  
3 favor to presume he is not impaired and they're also asking  
4 to introduce all these variables, then unlike the State,  
5 they're not making a choice. They're getting both ends of  
6 the bargain if you will. They get to introduce all the  
7 uncertainty (inaudible) on the partition ratio and all the  
8 associated factors that may or may not impact relation  
9 between breath and blood testing and they get the  
10 presumption of .05 below is not impaired. Unlike the State  
11 which had to pick one of the two and make a choice, they  
12 would be getting both.

13           So in one, they're exercising a prosecutorial  
14 function and in the other they're not making a choice,  
15 they're getting both. That doesn't seem to be appropriate  
16 or fair or what Guthrie is telling us it stands for.

17           THE COURT:     So we're arguing this now, I guess.

18           MR. MILLS:     Well, I was trying to see where --

19           MR. NESCI:     I was ready to make opening --

20           MR. MILLS:     -- I need to go to try to, to try to  
21 focus on where we need to go.

22           THE COURT:     All right. Well, I'll tell you what  
23 -- let me tell you what I said in my opinion, which I still  
24 think is the way I read Guthrie and so, the way I read  
25 Guthrie is, it says if the State chooses to take advantage

1 of a statutory presumption. It doesn't say if the State  
2 wants to use it or not. That presumption is there. It's  
3 part of the law and I think anytime you say, oh, what's  
4 universal impairment? Oh, and oh-eight means anybody's  
5 impaired to drive, then you're arguing some way or another,  
6 hey, here's this oh-eight, above an oh-eight, that means  
7 impairment. Every time you say, oh, well, the field  
8 sobriety tests, he failed them. We all know what the field  
9 sobriety tests are based on. They're based on .08 or  
10 above. That's the standard for them passing or failing.  
11 To me that's the State taking advantage of it. To me if  
12 the State argues anything to do with the numbers showing  
13 impairment, they're taking advantage of it.

14 I also think the presumption is the presumption.  
15 It's there in the law and I think that anyone can have it  
16 read. I don't know that you can say we don't want it read,  
17 we do want it read. If somebody wants it read, that's,  
18 it's there. It's not something for the State to use.

19 So given that that's kind of the way I'm looking  
20 at this part of it, then, you know -- and I'm sure, make  
21 your whole record because other judges are going to use  
22 this. But that's kind of my feeling about this which is  
23 why I think we have to go to the partition ratio and all  
24 the rest of the what's arguing what. I mean, what is based  
25 on the partition ratio, what's based on the function of the

1 machine.

2 Mr. Nesci, did you want to respond?

3 MR. NESCI: No. I agree entirely with you, Your  
4 Honor.

5 THE COURT: All right. So assume, Mr. Mills, at  
6 least for me, for putting on your evidence in this hearing  
7 that the presumption will be read when anybody wants it.  
8 And let's go from there.

9 MR. MILLS: Give me a moment, Judge.

10 THE COURT: Okay.

11 MR. MILLS: You're talking about the oh-eight  
12 presumption?

13 THE COURT: Uh-huh.

14 MR. MILLS: Well, I'm kind of in a odd box, Your  
15 Honor. The State's position you well know what it is. The  
16 defense is the one that asked for this hearing. Given that  
17 it looks like a legal ruling, a legal interpretation, I'm  
18 not sure what evidence they're going to put on to justify  
19 or where exactly they're going with that. It seems to me  
20 they're the ones that require evidence. You said you were  
21 going to submit a ruling if they ask for a hearing to put  
22 on evidence. I don't really know where they want to go  
23 with this. It seems to me to make more sense, that it's a  
24 defense request to put on evidence to have them go forward  
25 with their plan and then I'll figure out what it is and I

1 can respond to that with my witness.

2 But I don't really know where it is they intend  
3 to go and what they intend to show. We have the legal  
4 interpretation. I'm not sure where they want to go with  
5 the evidence. I would ask that they actually go first at  
6 this point since they're the one that asked you to  
7 supplement the evidence and I don't know what the theory is  
8 going to be about it. The legal theory seems to me is  
9 straightforward, but I'm not sure where they want to go  
10 with scientific evidence. They're the ones that wanted to  
11 do that and asked for Chester to testify. I have no  
12 problem with that, but since I don't know what their  
13 strategy is or where they're going, I'm kind of at a loss  
14 to put on evidence with the State not knowing what the heck  
15 to rebut or counter. So I would ask that they actually go  
16 first at this point since they're the ones that wanted to  
17 put on evidence.

18 THE COURT: Do you want to go first, Mr. Nesci?

19 MR. NESCI: Your Honor, the State filed a motion  
20 in limine to preclude reference or testimony re  
21 breath/blood conversion, partition ratios, breath or body  
22 temperature, breathing patterns or RFI. Based on  
23 relevance, if the State wants to say that these things are  
24 irrelevant and they filed a motion, it's their burden. If  
25 they don't want to put on any evidence at all, then we

1 don't have any evidence. And the State has not shown that  
2 these things are irrelevant in any manner whatsoever. We  
3 didn't file the motion. They did.

4 I mean, I just don't know where to go from this  
5 point. I've never heard something like that from a  
6 prosecutor before, filing a motion and saying, well, we  
7 filed the motion, it's our burden, but you guys got to go  
8 first.

9 THE COURT: As far as I can tell, Mr. Mills, I  
10 think that others have ruled the same way I have, that we  
11 are all content to find that Guthrie says that you can have  
12 partition ratio on the (A)(1) charge. You all move to  
13 preclude breath and body temperature, breathing patterns  
14 and RFI.

15 And, like I said, I heard rumblings and read this  
16 California case that seems to imply that maybe those are  
17 related to partition ratio, maybe they're not, and that you  
18 are all trying to fit them under the same ruling, under  
19 Guthrie. And I don't know enough to make that decision.  
20 So to me that's what the experts are here for, is to -- I  
21 don't know and I think it would be helpful, given what's  
22 come down from Superior Court so far, it would be helpful  
23 to have a record of how those things are related to  
24 partition ratio, how they're related to the operation of  
25 the machine, because I can't make an intelligent decision

1 on whether or not they're relevant, whether or not they  
2 are hypothetical, whether or not they're related to  
3 partition ratio.

4 MR. MILLS: Okay. With the Court's  
5 clarification, I think maybe we can do that. Still extend  
6 the option, if they don't want to do that, I guess we can  
7 go forward. But, again, it was them that asked for  
8 evidentiary. As you well know, they wanted to put on  
9 evidence, so I said okay, let them put on their evidence  
10 and I'll know what the playing field is and then I can  
11 counter. So I'm kind of blindfolded here and I appreciate  
12 your direction.

13 THE COURT: Well, I think we agreed at the last  
14 hearing that all of us kind of, you know, have listened to  
15 Mr. Flaxmayer a lot and listened to the State's experts a  
16 lot, but that doesn't mean that Superior Court or anyone  
17 who's going to be reading our record has listened to these  
18 people or know --

19 MR. MILLS: Sure.

20 THE COURT: -- or know what we're all talking  
21 about.

22 And like I said, I am certainly not familiar  
23 enough with how these other things are related to the  
24 operation of the machine compared to a partition ratio kind  
25 of calculation thing to be able to make a good decision.

1 So I would like to hear it. And it is your motion.

2 MR. MILLS: All right. Then the State would  
3 call Mr. Mike Sloan as a witness.

4 MR. SLOAN: Stand over here or here?

5 THE COURT: Wherever you want.

6

7

MIKE SLONEKER,

8 having been first duly sworn upon oath, was examined and  
9 testified as follows:

10

11

DIRECT EXAMINATION

12 BY MR. MILLS:

13 Q For the record tell us your name and occupation,  
14 please.

15 A Sure. My name is Mike Sloneker. It's spelled S  
16 as in Steven, l-o-n as in Nancy, e-k-e-r. I'm a  
17 criminalist at the Department of Public Safety's State  
18 Crime Lab in Phoenix.

19 Q And I would ask do you have a copy available,  
20 that you can make available to the Court and defense  
21 counsel of your curriculum vitae and historical expertise  
22 and experience?

23 A Not on me. I can run over it real quick if you'd  
24 like.

25 Q Sure. Go ahead.

1           A     Okay.  Basically, my educational background is a  
2  BS in education with a major in chemistry.  Upon graduation  
3  from college I spent two years in the Peace Corps.  After  
4  that, I spent six years as an oil field chemist.  And  
5  additional six years at the San Diego Police Department in  
6  their crime lab working in the forensic alcohol and  
7  narcotics unit.  After that, I came to work for the  
8  Department of Public Safety.  I've been here for about six  
9  years working in their crime lab as well.

10          Q     And in that capacity are you familiar with blood  
11 alcohol testing?

12          A     I am.

13          Q     And breath alcohol testing?

14          A     I am.

15          Q     Are you familiar with the regulations in Arizona  
16 related to the Intoxilyzer 8000?

17          A     I am.

18          Q     And are you aware that in this case an  
19 Intoxilyzer 8000 was used for both of these defendants?

20          A     I am.

21          Q     And have you had a chance to review the police  
22 reports and the Intoxilyzer 8000 printout and test cards in  
23 those two cases?

24          A     I have.

25          Q     Based upon your review, does it appear to you

1 that both of those individuals were accurately and  
2 appropriately tested on the 8000?

3 A They were.

4 Q As far as the accuracy of getting breath tests,  
5 are breath tests' accurately, accuracy affected by a  
6 person's breathing pattern?

7 A Well, the ability of the instrument to analyze  
8 what's in the breath chamber is not affected by how the  
9 person breathes.

10 Q So it's able to sample accurately whatever breath  
11 is put into it?

12 A That's correct.

13 Q Would a person's body temperature or breath  
14 temperature affect the accuracy of the subject's breath  
15 that actually enters the sample chamber in an Intoxilyzer  
16 8000?

17 A No.

18 Q What about the person's, I guess it's called  
19 hematocrit or its blood consistency of an individual, does  
20 that have any effect upon the accuracy of the sample a DUI  
21 defendant would be introducing into an Intoxilyzer 8000?

22 A No.

23 Q When you talk about partition ratio, can you tell  
24 us what that term means in your estimation?

25 A Sure. Basically a partition ratio, it's all over

1 in science and its regard with Henry's Law. A partition  
2 ratio is basically you had a volatile in a fluid and rather  
3 than actually measuring that fluid, you're going to be  
4 sampling the air above the fluid. And if there is a  
5 volatile in the fluid, you're going to find that volatile  
6 in the head space in the air above that fluid.

7 Now, the partition ratio relates the amount of  
8 that volatile in the air to the amount in the blood.  
9 Essentially the partition ratio for breath alcohol testing  
10 is 2100 to 1, meaning that if I found one part of alcohol  
11 in the air in the person's lungs, that is equal to 2100  
12 parts in their blood.

13 Q And is that the legal standard here in Arizona  
14 for breath testing --

15 A That is a federal standard and it is the legal  
16 standard here in Arizona as well.

17 Q As far as that goes, can you tell us up until  
18 when that figure was generally accepted in the scientific  
19 community?

20 A Well, it was -- the figure came about in '74 at  
21 an ad hoc committee of the world's leading researchers in  
22 forensic alcohol. And they came up with this 2100 to 1  
23 ratio at the time and they thought it was the accurate  
24 partition ratio. Well --

25 Q Go ahead.

1           A     As time has come about and more studies have  
2 been done, we have come to realize that 2100 to 1 ratio  
3 actually underestimates what the actual partition ratio is.

4           There have been further studies, for instance the  
5 New Zealand study, which measured over 21,000 subjects. In  
6 the 21,000 subjects the average partition ratio is actually  
7 2440 to 1.

8           It is generally accepted that the partition ratio  
9 is going to fall somewhere around in the 2300 to 2440  
10 range.

11          Q     What affect does that have upon the assumption of  
12 2100 then when you use an Intoxilyzer 8000 based on 2100 to  
13 1? Does the reading that comes out, therefore, show an  
14 alcohol concentration in the breath that's higher or lower  
15 than the true equilibrium to blood at that point?

16          A     If you're comparing it to the blood, it is going  
17 to underestimate what's actually in the blood by about ten  
18 percent.

19          Q     Can you enumerate for the Court the type of  
20 things, the factors that go into achieving a breath/blood  
21 alcohol partition ratio, whether it involves temperature of  
22 the breath, breathing patterns, what other variables go  
23 into that when a person talks about the blood/breath ratio?  
24 What sort of things affect that comparison?

25          A     Pretty much everything that's been said so far

1 except RFI. RFI has nothing to do with partition ratios.  
2 But as far as the person holding their breath, that's going  
3 to adjust the partition ratio. Essentially what you're  
4 doing -- partition ratio -- anything to do with temperature  
5 is going to eventually fall back to partition ratio, change  
6 the partition ratio. When a subject is holding their  
7 breath, the air exchange that normally happens in a  
8 subject's lungs doesn't happen. The air inside their lungs  
9 heat up. That heating up of the air inside their lungs  
10 adjusts the partition ratio. It allows more of the  
11 volatile into the air inside their lungs.

12           If you think about it, if I were to have like a  
13 cup of gasoline and I were just to sit the cup of gasoline  
14 on the countertop, eventually all that gasoline would  
15 evaporate. Now, if I were to stick that cup of gasoline  
16 over a flame, it's going to heat up and it's going to drive  
17 more of that gasoline into the atmosphere at a quicker  
18 pace. And it's the exact same way with partition ratios.

19           Whatever is going to make that temperature hotter  
20 is going to affect the partition ratio and it's going to  
21 affect it in a way that's going to overestimate what was  
22 actually in the person's blood at the time.

23           Now, it works the exact same way in reverse. If  
24 the person is chilled down or if the person is breathing in  
25 quick, breathing in and out quick, it's going to cool the

1 lung. And it's going to draw it down, that partition  
2 ratio and make the breath over, or underestimate what  
3 actually was in the blood.

4 Q So when we're talking about the partition ratio,  
5 that's always assuming there's a contemporaneous blood  
6 sample drawn at the same time as the breath sample to make  
7 that --

8 A That is correct. Yeah, you have to have  
9 something to compare it to. If you're interested in  
10 comparing it to the blood, which there have been thousands  
11 of studies out there that have compared the blood to the  
12 breath. If you're doing that, then you're going to draw it  
13 simultaneously.

14 Typically when I do a study, what I do since the  
15 Intoxilyzer you've blown into it twice, I will have the  
16 person blow into, there's a five minute wait. During that  
17 five minute wait, that's when I get the person's blood and  
18 then they blow into in another five minutes and then I get  
19 a breath, a blood and a breath and you get really nice  
20 sandwiched numbers and you get good results.

21 Q So if there's no blood sample in the defense  
22 case, then there's nothing actually to compare the breath  
23 test to?

24 A Correct.

25 MR. NESCI: Objection. Calls for speculation.

1 MR. MILLS: No, I think it's a scientific  
2 question. If you don't have a sample of blood to compare a  
3 breath to, done simultaneously, there's nothing to compare  
4 it to.

5 THE COURT: Overruled.

6 THE WITNESS: That's correct. There's nothing  
7 to compare it to.

8 BY MR. MILLS:

9 Q Even if there had been one done, however, and you  
10 wanted to do this comparison, have studies been done to  
11 show what length of time it takes to hold one's breath to  
12 achieve any measurable change in the partition ratio?

13 A Yes.

14 Q And what amount of time does a person have to  
15 hold their breath to affect any change in the result in the  
16 breath/blood comparison?

17 A Thirty seconds.

18 Q Are you familiar with the instructions in Arizona  
19 that officers receive in using an Intoxilyzer 8000 and how  
20 it instructs an officer to tell a subject how to breathe  
21 just as they begin to breathe into the machine?

22 MR. NESCI: Objection. Compound question.

23 MR. MILLS: If you can handle it.

24 THE COURT: If you can answer it.

25 THE WITNESS: Yeah. I can handle that one.

1           Actually, I teach the officers. So, yes, I am  
2 familiar with how they are instructed.

3 BY MR. MILLS:

4           Q     And what is that?

5           A     The officer is instructed to tell the individual  
6 to take a deep breath and blow until the tone stops.

7           Q     So, let me ask you, if a person had held their  
8 breath for 30 seconds, then was told to take a deep breath  
9 and blow in, does this previous holding of the breath for  
10 30 seconds then have any effect on the breath test?

11          A     That's interesting. I don't see how they can be  
12 holding their breath and then take a deep breath. But if  
13 they were to be holding their breath and then taking more  
14 breath on top of that, the outside air would be cooling the  
15 lungs inside their air -- the lungs inside their air -- the  
16 air inside their lungs lowering that number. So, although  
17 there's been no studies done, commonsense would say that  
18 that cooler air coming in would then re-fix that partition  
19 ratio.

20          Q     And I don't know why they would do it since it  
21 lowers it, but if they were breathing fast for 20 seconds,  
22 but then took a deep breath and then blew into the machine,  
23 would the result be similar or different?

24          A     It would be -- it reset if you would.

25          Q     Yeah, right.

1           A     The effects of cooling the lung would then be --

2           MR. NESCI:    Objection, Your Honor.  I would  
3     object on grounds of speculation.  There are no studies on  
4     this.  This is just him guessing.  And I'd ask that it be  
5     entirely stricken from the record.

6           THE COURT:   What's the point, Mr. Mills

7           MR. MILLS:   I think the scientific evidence of  
8     an expert, Your Honor, can, at this point, since we're not  
9     dealing with any seemingly particular defendant yet, it's  
10    proper evidence.

11          MR. NESCI:   He prefaced it with commonsense  
12    would tell you.  He didn't say in my expert opinion or in  
13    the expert opinion of the community.  He said commonsense  
14    will tell you.

15          THE COURT:   I'm going to overrule the objection.

16    BY MR. MILLS:

17          Q     All right.  So if I understand you correctly, if  
18    there was a breathing difference, but the subject follows  
19    the correct command by the officer giving the test to  
20    breathe deeply then blow into the machine, whatever you've  
21    been doing before that is pretty much canceled?

22          A     The effects wouldn't totally be canceled, but  
23    they would be significantly reduced.

24          Q     Would they be canceled enough to no longer affect  
25    the accuracy of the machine to still be within plus or

1 minus --

2 A This has nothing to do with the accuracy of the  
3 instrument.

4 Q I'm sorry.

5 A The instrument is analyzing what is in the breath  
6 chamber.

7 Q You're correct.

8 A You can't --

9 Q Correct. You're right.

10 And as far as a comparison between the breath and  
11 blood, would it affect it more than the accepted ten  
12 percent whatever residual affect is left of this different  
13 type of breathing?

14 A More than the ten percent, no.

15 Q Would it --

16 A I don't know what you mean by accepted ten  
17 percent.

18 Q That generally there's a ten percent variation  
19 between breath and blood anyway.

20 A Oh. Because it would -- correct.

21 Q What about blood consistency, hematocrit it's  
22 otherwise called. Can you explain what that is, number  
23 one? And, number, if it plays any role realistically in the  
24 blood/breath partition ratio.

25 MR. NESCI: Objection, Your Honor, on grounds of

1 relevance. The State did not ask to preclude any  
2 testimony regarding hematocrit. It was blood to breath  
3 partition ratio. It was breathing patterns. It was  
4 temperature and it's RFI.

5 MR. MILLS: The motions I have, I don't know  
6 where the RFI came from. It was hematocrit that I saw.

7 MR. NESCI: Well --

8 THE COURT: All the motions I have read  
9 blood/breath conversion, partition ratios, breath or body  
10 temperature, breathing patterns or RFI. I haven't seen  
11 anything about hematocrit.

12 MR. MILLS: I guess that was because I was more  
13 familiar with the (inaudible) decision, Your Honor, which  
14 we had supplied to this Court. To the extent I can amend  
15 that, I would say hematocrit to be excluded as well. RFI  
16 does not belong in there as the witness testified and I was  
17 going to correct our pleading a moment ago. RFI is subject  
18 for attack anytime you're using an Intoxilyzer.

19 MR. NESCI: So wait a minute. The State is  
20 asking to get rid of their, get rid of their request to  
21 preclude RFI and substitute in hematocrit?

22 Judge, I think, you know, if that's that the  
23 case, I think what's going to have to happen is when we're  
24 done with Mr. Sloneker here, the defense is going to have  
25 to have the opportunity to go ahead a little bit more

1 research on it and call a different expert maybe in  
2 addition to Mr. Flaxmayer regarding hematocrit.

3 I mean that was -- you can't just come up and go  
4 here it is by surprise. We're going to throw it in at the  
5 last second because I forgot and I mistook RFI for  
6 hematocrit.

7 THE COURT: All right. But do we want to do all  
8 this over again with hematocrit? I don't. Let's let the  
9 State put on their evidence. You can cross-examine as much  
10 as you want. If you feel the need to supplement the record  
11 at some other point, I will let you do that, Mr. Nesci.  
12 But we've got two good experts here, let's use them. Let's  
13 -- if hematocrit seems to -- I mean, obviously RFI doesn't  
14 belong here so let's take that off the table and put,  
15 reflect on the record that the State's not asking to  
16 preclude that anymore. And that we'll talk about  
17 hematocrit and go from there. All right.

18 MR. MILLS: Thank you, Your Honor.

19 THE COURT: And if you want to supplement your  
20 motions, you want to supplement the record later, then you  
21 can do that, Mr. Nesci. Okay.

22 MR. NESCI: Thank you.

23 THE COURT: All right.

24 THE WITNESS: Back to hematocrit.

25 . . .

1 BY MR. MILLS:

2 Q Back to my question. Tell us what hematocrit is  
3 and what will, (sic) if any, it plays in the partition  
4 ratio, breath to blood comparisons.

5 A Sure. Basically hematocrit is just a measurement  
6 of how many red blood cells are in the person's blood, in  
7 the whole blood.

8 If you take a blood sample and you spin it down,  
9 you remove all the solids from that blood and you're left  
10 with solids on the bottom and plasma on the top. Now,  
11 you've got two arguments for this. You've got the theory  
12 and then you've got that which has been shown by science.

13 Theory would state, and it sort of makes sense  
14 and this is where theory sort of sometimes divorces itself  
15 from reality. Theory would say that if I have -- and if I  
16 could draw a quick picture, it's a heck of a lot easier --

17 MR. MILLS: Make this State's 1, Your Honor, for  
18 illustrative purposes.

19 MR. NESCI: I'm going to object on grounds of  
20 foundation. What theory? I mean, he doesn't tell us who,  
21 how this theory came about. Who's theory it is.

22 MR. MILLS: We're on foundation. If I could  
23 have a moment, we'll do exactly that.

24 THE COURT: Huh?

25 MR. MILLS: I said we're on foundation. If we

1 could have a few moments, we'll establish that.

2 THE COURT: All right.

3 THE WITNESS: What theory is? Theory is that  
4 which has to be proven by scientific law. So you've got  
5 hypothesis, followed by theory, followed by scientific law.

6 THE COURT: All right. Well, why don't you  
7 follow through with a few more questions on where this is  
8 coming from, Mr. Mills.

9 BY MR. MILLS:

10 Q Just tell us what the theory is, first.

11 A Basically, the theory is if I have, if I draw a  
12 picture here for the theory it's a heck of a lot easier to  
13 explain it with this.

14 The theory states that if I have one glass and I  
15 have two glasses and they're both -- well, actually let's  
16 do, let's do both equal, the same glasses. One is just  
17 filled with water. One is filled with water, but inside  
18 that water are bits and pieces of solid material. All  
19 right. So this one is going to have more liquid in it.  
20 This one has the same volume, it's just that it has less  
21 liquid because there's more solid. All right. If I were  
22 to put one, two, three, four, five, six, seven, eight,  
23 nine, ten, one, two, three, four, five, six, seven, eight,  
24 nine, ten, ten drops of blue food coloring in each, this  
25 one will appear more blue because there's less water in

1 which, for the blue food coloring to disperse. Okay.

2 That's the theory. Okay. That's the theory. If I have  
3 more liquid, more liquid with the same color dye, you're  
4 going to get less color change.

5 Same way with blood alcohol. Right. I've got  
6 blood. In some of my blood I've got cells. In this case  
7 the dots are representing the cell. If an individual has  
8 five beers, all right, and one individual has a low  
9 hematocrit, more water, if they have five beers and one guy  
10 has five beers and he has a higher hematocrit, lots of  
11 solids, the concentration of alcohol is going to be greater  
12 in this one. More blue. Got it? That's the theory. And  
13 it makes sense. That should be the way it plays out.

14 However, Jones did a study which he took an  
15 individual -- it was in vitro, in a sample, he took  
16 different hematocrits of blood. He put alcohol in them and  
17 he analyzed them and it didn't make any difference.

18 So this is one of these, one of these areas where  
19 theory didn't match up to reality and that's why we had the  
20 scientific, scientific --

21 THE COURT: Process.

22 THE WITNESS: Thank you. Scientific process.

23 Very good.

24 THE COURT: Red blood cells are the solids in  
25 your --

1 THE WITNESS: Then you have white blood cells,  
2 too, but the vast majority of it is your red blood cells.

3 THE COURT: Okay.

4 BY MR. MILLS:

5 Q So if I understand your testimony then the theory  
6 was that you might have a difference among individuals  
7 depending upon how much hematocrit is in their particular  
8 blood system, but, in fact, the scientific testing pans out  
9 that it doesn't matter in real humans how much you have?  
10 It just doesn't make any difference in the simultaneous  
11 breath/blood comparisons?

12 A Correct.

13 Q All right. What other factors go into affecting  
14 the ratio between breath and blood readings when you do  
15 simultaneous comparisons?

16 A The basic temperature is it. So things that  
17 alter temperature are going to alter that. So holding the  
18 breath alters temperature. Hyperventilating alters  
19 temperature. If the person just has a -- if a person has a  
20 fever, that's going to alter it. If a person has a sub-  
21 fever, that will alter it. However, the normal operating  
22 daily normal temperatures of an individual has been shown  
23 not to actually affect it. So the person actually has to  
24 be in a fevered state.

25 Q What temperatures can a person be in degrees

1 Fahrenheit and not affect the simultaneous breath and  
2 blood readings?

3 A Up to 99.8 is considered a normal -- at least  
4 that was the normal temperature that this study, the Cowan  
5 study, actually took a look at.

6 Q And when was that study reported or done?

7 A 2010.

8 Q That's the Cowan study?

9 A Correct. It was actually published in 2010. It  
10 was done earlier than that.

11 Q And so is the range then from 96.8 or what's the  
12 lower --

13 A 96.8 to 99.8.

14 Q Okay.

15 A So once you deviate outside of that range, either  
16 to the low side, then you start to affect it, or to the  
17 high side you start to affect it there, too. Now, I have  
18 to preface that the studies that show that it is affected  
19 were not actually caused a legit fever. For instance,  
20 there as a study done about the hot tub study which they  
21 put a bunch of guys in a hot tub and got their body  
22 temperature up to a fevered status and then they sampled  
23 them and took a look at what it did and did, it  
24 artificially elevated their breath by about 8.6 percent.

25 However, that was not, that's not the same kind

1 of temperature, a (inaudible) temperature, someone that's  
2 actually sick what that would cause them to do. That study  
3 has yet to be done. But if anybody would like to volunteer  
4 for that study next time they're sick, come to DPS.

5 Q So nowhere in the literature is there actually  
6 studies based on people with temperatures and what affect  
7 that has on the simultaneous breath/blood --

8 A That's correct.

9 Q -- comparison?

10 A What we have to go on is the hot tub studies and  
11 that's what we go on.

12 Q What affect, if any, does gender have on  
13 blood/breath comparisons?

14 A None.

15 Q And have there been studies to validate that?

16 A Yeah. Essentially whenever you do a study, you  
17 have a female, well, typically you have females and males  
18 in and you do your blood to breath comparison and you don't  
19 see any difference, differences between those.

20 Q Some have offered that there might be a  
21 difference due to barometric pressure. Do you know  
22 anything about that subject --

23 A Not --

24 Q -- affect?

25 A Nope. Not seen that. Now, there is going to be

1 a difference in --

2 MR. NESCI: Objection. There's no question  
3 before him.

4 THE COURT: Sustained.

5 BY MR. MILLS:

6 Q What other observations can you make about  
7 barometric pressure and any affect it might have on red  
8 blood -- breath/blood comparisons?

9 A Nothing by the barometric pressure.

10 Q What about elevation above sea level or is that  
11 the same thing?

12 A That's the same thing.

13 Q Are any of these factors applicable to taking  
14 breath samples from individuals and getting accurate  
15 results from them if you're just taking breath samples?

16 A You're going to have an accurate -- the 8000's  
17 accuracy in no way is impeded by whether or not the  
18 individual has held there breath, whether or not the person  
19 has a temperature, so on and so forth. It is what it is.  
20 An accurate instrument.

21 Q Can you tell us about just breath testing itself,  
22 where is it getting the alcohol from? Can you tell us if  
23 there's a differentiation between venous and arterial blood  
24 in the body and where breath alcohol samples come from in  
25 relation to which of those two?

1           A     Sure. Breath alcohol is actually a measurement  
2 of arterial blood. And that's actually one of the biggest  
3 differences that you see between a blood test and a breath  
4 test, the differences between why breath is different from  
5 the blood is because the blood is actually sampling the  
6 venous system and the breath is sampling the arterial  
7 system. And depending upon what part of the blood alcohol  
8 concentration curve the person is in, you're going to get a  
9 slightly different result.

10           Q     Are you referring to the difference between  
11 absorption phase and elimination phase?

12           A     I am. And I could --

13           Q     Would you explain that for the Court, please?

14           A     I could. Another quick picture would be worth a  
15 thousand of my words.

16           MR. MILLS:   We could label this State's 1 and 2  
17 (inaudible).

18           THE COURT:   Maria, why don't you wait for those  
19 while we -- remember what they are.

20           MR. MILLS:   -- record for illustrative purposes  
21 only.

22           THE WITNESS:   Do you want me to label this one?

23           MR. MILLS:   Yes, if you would.

24           THE COURT:   Maria is bringing stickers.

25           THE WITNESS:   Oh.

1 THE COURT: Call that hematocrit so I know  
2 what, remember what we were talking about.

3 Let me ask you while we're doing sticky things.

4 The hematocrit has nothing to do with the whole  
5 partition ratio thing? That's like a totally different  
6 theory, right? I mean, that has, it's not related to the  
7 partition ratio, the whole . . .

8 THE WITNESS: That's correct, yeah.

9 THE COURT: Okay. I just wanted that clear for  
10 the record. Okay.

11 THE WITNESS: Okay. So let's see. This one,  
12 all we're talking about is the blood alcohol concentration.  
13 Okay. So basically the one alcohol concentration here the  
14 person, let's say, they just have five shots of liquor real  
15 quick. So what you're going to have is the one alcohol  
16 concentration is going to go up, it's going to peak and  
17 then it's going to start to drop back down. This is  
18 typically labeled the absorption side, absorption peak and  
19 then elimination.

20 It's sort of a misnomer because one would think  
21 that elimination, this is where the body is getting rid of  
22 the alcohol. Well, it's also getting rid of the alcohol  
23 over here, too. It's just getting rid of less alcohol than  
24 is coming in.

25 If you think of it like a bathtub that's half

1 open, you turn on the water full blast, the water level in  
2 the bathtub is going to start to increase. Right. There's  
3 still water going out the bathtub, just more is coming in  
4 than is going out so you get an increase in the blood  
5 alcohol concentration. And this is your BAC here. And  
6 this is time.

7 All right. Now, the difference arises in the  
8 fact that with blood, blood is measuring the venous system.  
9 The venous system is that which has already gone to the  
10 brain, has already impeded the individual, impaired the  
11 individual and now the blood is trying to find its way back  
12 to the liver to be cleaned up and sent back to the lungs.

13 What happens is the arterial is the system that  
14 is first loaded with alcohol. Right. It hits the arterial  
15 before it can get to the venous. Right. So if I have just  
16 had five beers, my arterial system is going to have more  
17 alcohol in it than does my venous. Right. So what that  
18 looks like, I'm going to make the blue line is going to be  
19 our venous system and my green line is going to be  
20 arterial. So on this side arterial and also, incidentally,  
21 the arterial is also going to be measured by breath and the  
22 venous system is going to be measured by my blood draw  
23 because that's what we're sampling, the venous system.

24 So what we're going to have is the arterial  
25 breath is going to be slightly higher than the venous blood

1 until it reaches a peak. Then you're going to have them  
2 cross over and then they're going to exchange places. The  
3 arterial will be slightly lower than the venous because now  
4 there's no more coming into the arterial. The arterial is  
5 giving up its alcohol into the venous system and the venous  
6 system is going to be slightly higher. All right. And  
7 essentially -- this is the biggest difference that you see.

8 If you're looking at trying to explain other than  
9 the ten percent because of the 2100 to 1 ratio, because  
10 that's not really the ratio -- if you're just taking two  
11 samples and you're trying to account for the differences  
12 it's going to be because of the venous and arterial system.

13 If I were to make the partition ratio what it  
14 actually is, 2350 to 2440, the difference that would be  
15 left is because you're sampling the arterial versus the  
16 venous.

17 And you typically see this being about a .01  
18 higher on this side. Oh-one higher and here just about  
19 (inaudible).

20 THE COURT: Maria, will you mark that as 2.

21 MR. MILLS: Yes. Thank you.

22 BY MR. MILLS:

23 Q And have there been any studies shown that in DUI  
24 cases which of the two situations is more typical of being  
25 encountered in real life in the field by law enforcement in

1 DUI cases?

2 A Sure. Goldberg has taken a look at that.  
3 Actually, a number of individuals have taken a look at it.  
4 Goldberg is probably the best study in which he went out to  
5 the roadside, field evaluations for DUI, had them blow into  
6 a PBT, followed them downtown. Had them blow into a PBT  
7 again. He compared those two numbers. And what he found  
8 out was with a 95 percent certainty is that they were  
9 higher or equal to, at the time of driving, they were  
10 higher than, higher than or equal to what they were at the  
11 time of the test. And that's typically, and that backs up  
12 what we would think of a normal drinking scenario. If  
13 someone were to go to a bar, consume some alcohol, when  
14 they're seeing that it's almost time to go, they typically  
15 stop drinking and switch over to Pepsi or Coke to give  
16 themselves time to sober up. That peaks them and starts  
17 them on the elimination phase. By the time they get into  
18 their car, they're fully in the elimination phase. And  
19 that's the reason why that partition ratio, that 2440, is  
20 typically held out.

21 Q So what was the result or did he do any  
22 determination of what percentage of people stopped for DUI  
23 were in the elimination phase?

24 A Well, yeah, Goldberg is a statistician, and he  
25 does everything with statistics and he did have a 95

1 percent certainty interval. So according to his study,  
2 you can say with 95 percent certainty they're either  
3 higher, they're either higher at the time of driving or  
4 equal to at the time of driving when they were at the time  
5 of the test.

6 Q Is there a particular reason scientifically why  
7 we don't need to convert breath to blood anymore to achieve  
8 forensically acceptable results for a breath sample of a  
9 DUI defendant?

10 A Because those studies have all been done. Before  
11 breath was even considered to be evidentiary, hundreds,  
12 thousands of studies were done to compare blood to breath  
13 to make sure that breath actually replicates blood, that it  
14 can estimate blood. They were doing this back in the 1930s  
15 was the first study that was published comparing blood to  
16 breath when they blew up footballs for their volume of air  
17 and they used the footballs for measurements.

18 Q Are all the factors that you've been talking  
19 about part of what's referred to as the partition ratio  
20 factors when comparing blood and breath simultaneous  
21 readings?

22 A Those are all factors that contribute to a  
23 difference in partition ratios, yes.

24 Q Is that --

25 MR. NESCI: Objection. Form of the question.

1 All of the factors. He said hematocrit wasn't. So I'd  
2 like to know what factors they are so we have some  
3 specificity or I'd like that question and answer stricken  
4 from the record.

5 THE COURT: Yeah. Could you rephrase that, Mr.  
6 Mills?

7 MR. MILLS: Sure.

8 BY MR. MILLS:

9 Q You obviously have properly commented RFI has no  
10 part in it. You've debunked at least the theory that  
11 hematocrit would play a part in breath/blood simultaneous  
12 comparisons. I believe you discussed several others,  
13 breathing patterns, breath temperature, body temperature,  
14 ruled out barometric pressure and sea level having any play  
15 in this. Of the ones that you said do play a role between  
16 breath and blood, are those ones generally accepted as  
17 having an effect in comparisons between breath and blood  
18 studies?

19 A Yes.

20 Q Are there any others that you haven't mentioned,  
21 that you haven't mentioned that affect that?

22 A I think, I think I touched on everything.

23 Q When we have breath testing done in the state of  
24 Arizona according to the regulations and the proper use of  
25 an Intoxilyzer 8000, when the statement is made that that's

1 accurate within ten percent, ten percent of what?

2 A That's a good question. I've never testified  
3 that it's ten percent. The accuracy of the instrument, CMI  
4 states that, the manufacturer of the instrument, states  
5 that it's 30 percent. It doesn't leave our office unless  
6 it demonstrates that it's, can accurately read a standard  
7 of plus or minus five percent.

8 The notion that this plus or minus ten percent  
9 came about from, I suppose a misunderstanding or  
10 misinterpretation --

11 MR. NESCI: Objection. Speculation. If he  
12 supposes, then that's speculation.

13 THE COURT: Sustained.

14 BY MR. MILLS:

15 Q Well, do you have any historical reason to  
16 believe where that came from?

17 A I do.

18 Q Can you tell us what that is? What it's based  
19 upon?

20 A Sure. The standard itself the instrument's  
21 allowed to read plus or minus ten percent of a given  
22 standard and still be considered working accurately at the  
23 time of the test.

24 All right. So because it has this plus or minus  
25 ten percent window that it's allowed to read a standard,

1 it's often, that ten percent is often applied erroneously  
2 to its accuracy. That plus or minus ten percent came about  
3 because the 5000, the 8000's predecessor, used a wet bath  
4 standard. A wet bath standard was a water sample that had  
5 a known amount of liquid in it. It would begin a month as  
6 a .100 standard. And the way the standard worked was that  
7 air was bubbled into this simulator jar. The air bubbled  
8 through this liquid, collected some of the alcohol from the  
9 water, just like our lungs, and then that air was pumped  
10 into the instrument. So it would start at the beginning of  
11 the month as a .100 standard. By the time it did 50 or 60  
12 tests, some of that alcohol was consumed and so the  
13 standard would start to deplete over time. Because that  
14 standard depleted over time, they gave us this wide window  
15 so that we wouldn't have to use six or seven standards  
16 every month. We could use one standard and have it be able  
17 to get through that entire month.

18 Now, the 8000 uses a dry gas standard. It does  
19 not deplete over time. It starts its life as a .100  
20 standard and it ends its life as a .100 standard. But when  
21 the 8000 came into being, we just decided, you know, if the  
22 plus or minus ten percent was good enough for the 5000,  
23 we're not going to go back and change all that. We're just  
24 going to leave it as is.

25 But I'm telling you if there's an instrument out

1 in the field whose first reading was a .090 and whose  
2 second reading was a .110, plus or minus ten percent, we  
3 would be pulling that instrument tomorrow. It does not  
4 read that wide a range.

5 Q What is the actual range of accuracy of it in  
6 your experience?

7 A As I stated, the Intoxilyzer that CMI states plus  
8 or minus 30 percent. It doesn't leave our laboratory  
9 unless it demonstrates plus or minus five percent.

10 Q If the breath tests were properly given according  
11 to Arizona regulations and your understanding as a teacher  
12 of that using an Intoxilyzer 8000 appropriately, are any of  
13 the variables that you talked about today going to, in  
14 fact, cause that reading to be more than ten percent away  
15 from what would hypothetically be a simultaneous blood  
16 test?

17 A Since I don't know what the blood test is -- but,  
18 no -- everything that I've stated before I would not expect  
19 it to be outside of ten percent given that the person was  
20 not allowed to hold his breath, that he actually did take a  
21 deep breath. We train the officers to ask the individual,  
22 How do you feel? We train the officers if the individual  
23 says, Oh, I feel like, I feel terrible. I've got the flu,  
24 we train them get blood or take the person's temperature.

25 So if they have followed everything that I have

1 stated, that breath test should be a great breath test,  
2 and very accurately representing what's in a person's  
3 blood.

4 Q One other question (inaudible) testifying. As  
5 far as a breath test, if accurately and appropriately done,  
6 measuring venous blood and a blood test -- I'm sorry. I  
7 did that backwards -- measuring arterial blood and a blood  
8 test measuring venous blood, as far as impairment goes,  
9 which of the two would scientifically be a better indicator  
10 of possible impairment to that individual?

11 A Well, arterial blood is the blood that's actually  
12 affecting the individual at that time. So I would  
13 preference arterial blood. If I want to know how impaired  
14 that person is at that time, arterial.

15 Q Which we can get with a proper breath sample?

16 A Correct. You can get it with a blood test, too,  
17 but the individuals wouldn't like it.

18 Q Why is that?

19 A Arterial -- you've got to do an arterial stick.

20 Q What's the difference between arterial and  
21 venous, just to be perfectly clear --

22 A Arterial is under higher pressure so there's a  
23 good opportunity to get arterial spurting. They're deeper  
24 under the skin so it's more painful to arrive at an artery  
25 than it is just to get a vein that rests right on top.

1 MR. MILLS: That's all I have for the present,  
2 Your Honor.

3 THE COURT: Okay. Mr. Nesci.

4 MR. MILLS: Ask for the admission of 1 and 2 for  
5 illustrative purposes only.

6 MR. NESCI: No objections to those.

7 THE COURT: All right. I'll admit 1 and 2.

8 Mr. Nesci.

9 MR. NESCI: Thank you.

10

11

CROSS-EXAMINATION

12 BY MR. NESCI:

13 Q. Mr. Sloneker, how are you?

14 A I'm good, thank you.

15 Q You said if somebody had a breath test of .090  
16 and then a second breath test of .110, you'd pull that  
17 machine out of the field?

18 A No, I stated cal check.

19 Q Cal check?

20 A Cal check, yes. If the cal check were actually  
21 plus or minus ten percent, that instrument would be pulled  
22 out of the field.

23 Q But a person could have a difference of .020  
24 between the first sample and the second sample?

25 A That is correct because there's a biological

1 component involved in a breath test that's not there for  
2 an analytical test.

3 Q All right. Let's talk a little bit about this.  
4 I mean, the knowledge of the existence of a relationship  
5 between blood and breath is nothing new to the scientific  
6 community, right?

7 A Correct.

8 Q In fact, in 1927 Emil Bogen published a paper  
9 entitled The Diagnosis of Drunkenness, right?

10 A She was the one that actually took a look at  
11 using breath first.

12 Q Yeah. The paper compared a number of ways to  
13 estimate the amount of alcohol that was in the blood,  
14 right?

15 A Correct.

16 Q And Bogen concluded that breath was a very  
17 attractive substitute for blood, correct?

18 A Correct.

19 Q And in 1938 we have the Drunkometer invented by  
20 Rolla Harger, right?

21 A Correct.

22 Q Now, that technology relied upon the oxidation of  
23 alcohol and accompanying change --

24 A Color change.

25 Q -- in color like ph in a swimming pool, right?

1 A It was a colorimetric analysis, correct.

2 Q Okay. Colorimetric analysis. You mean somebody  
3 looked at it and said this looks like this color, right?

4 A That is, that type of analysis is colorimetric  
5 analysis.

6 Q Okay. Colorimetric analysis.

7 A Right.

8 Q All right. And in the 50s we've got Borkenstein  
9 who invented what became known as the breathalyzer,  
10 correct?

11 A Correct.

12 Q And that relied on the same technology as the  
13 Drunkometer, right?

14 A Colorimetric analysis. However, the color was,  
15 the perception of that color was actually removed from the  
16 human, correct.

17 Q But then in '71 we have infrared spectroscopy  
18 coming along, correct?

19 A That's correct.

20 Q Okay. Now, since then, infrared spectroscopy has  
21 been the primary analytical technology for evidentiary  
22 breath alcohol testing, right?

23 A Fuel cell is relied upon heavily, too.

24 Q Okay. But would you say that it's the primary  
25 one?

1 A Depending upon what part of the world you're in.  
2 Here in Arizona, IR is the primary one.

3 Q Okay. Now, as breath issues became more  
4 commonplace in the courtroom, you'd say more questions  
5 arose about the practice of converting breath alcohol  
6 concentration into a blood alcohol concentration for each  
7 individual person, right?

8 A Well, before there were actually statutes for  
9 breath, you had to take breath and convert it to blood.  
10 There were no questions about it. You had to do it.

11 Q Okay. And it was in 1976 that Dubowski and Mason  
12 said that the practice should be stopped, right?  
13 Converting breath to blood or blood to breath.

14 A Well, they said the practice should be stopped in  
15 lieu of making legislation that would allow breath to come  
16 in.

17 Q Right. They recommended unfitness to drive be  
18 based upon breath alcohol concentration or blood alcohol  
19 concentration, correct?

20 A That is correct.

21 Q Now, by defining breath and blood alcohol units  
22 separately, the argument over individual differences in  
23 blood to breath alcohol ratios should be a non-issue,  
24 correct? I mean, if we define them separately. Blood is  
25 blood. Breath is breath, right?

1 A They should be, yes.

2 Q Okay. Now, Arizona law defines blood or breath  
3 concentration separately, right?

4 A That's correct.

5 Q Now, you're familiar certainly with the  
6 Intoxilyzer models 5000 and 8000, right?

7 A I am.

8 Q In fact, in San Diego you oversaw the process  
9 which replaced the 5000 with the 8000s, right?

10 A I did.

11 Q Okay. What's some differences -- I mean, the  
12 theory is, of infrared technology is pretty much the same,  
13 correct?

14 A That's correct.

15 Q Do the Intoxilyzer 5000 and 8000 convert breath  
16 to blood?

17 A No.

18 Q No?

19 A No.

20 Q You're sure?

21 A I'm sure.

22 Q Okay. You're positive?

23 A I'm positive.

24 Q Okay. (Inaudible) change your mind?

25 A I won't.

1 Q I'm showing you what's been marked as defense  
2 Exhibits A, B and C and I've got the full books here if  
3 you'd like to see them. But tell me, do you recognize  
4 these pages that I have placed in front of you as various  
5 copies of different Intoxilyzer 5000 manuals?

6 A You have here a copy of the front page of, I  
7 guess, a CMI document --

8 Q Sure. Would you like to see the entire manual to  
9 compare them to make sure --

10 A Throw them up here, just if I need --

11 Q Sure.

12 A -- to refer to them, I will.

13 Q No problem. Any time you need to look at the  
14 full manuals, feel free.

15 A Thank you.

16 Q But (inaudible) like the title page so you knew  
17 what it was, no confusion and then something else from  
18 inside there.

19 A Sure.

20 Q Okay. Now, you said the Intoxilyzer does not  
21 convert, correct?

22 A It does not convert to blood. It is a breath  
23 testing instrument.

24 Q Would you please flip to the page that says  
25 principle of operation on each one of those Intoxilyzer

1 5000 manuals?

2 A Sure.

3 MR. MILLS: Counsel, just a moment. I'm sorry.

4 Is this a duplicate. This looks like -- is there  
5 a difference here?

6 MR. NESCI: Yeah. There's -- oh, I'm sorry. I  
7 gave you two of the same --

8 MR. MILLS: Yeah, two of the same instead of  
9 three different ones.

10 MR. NESCI: Which one are you missing? Here.  
11 Take that. Give me this one back. Now you've got all  
12 three. Oh, you got it right there. I'm sorry. I gave you  
13 just two of the same anyway. You've got all three.

14 MR. MILLS: Okay.

15 BY MR. NESCI:

16 Q Principle of operation.

17 A General information.

18 Q Did you find principle of operation?

19 A I just assumed that your copy is what you wanted  
20 me to look at so I'm looking at that.

21 Q Yeah.

22 A Do you want me to find --

23 Q Yeah.

24 A -- principle --

25 Q On the copy. There's general information. One

1 says general information, one says principle of operation,  
2 actually two of them say principle of operation. Two of  
3 them say general information. No. Two of them say  
4 principle operation. One says general information.

5 MR. MILLS: I have two generals and one  
6 principle.

7 THE WITNESS: I have two general and one  
8 principle.

9 MR. NESCI: Okay.

10 BY MR. NESCI:

11 Q So we're looking at defense Exhibit -- what does  
12 defense Exhibit A say? Principle of operation?

13 A Exhibit C --

14 Q C says principle of operation, right?

15 A B --

16 Q B says general information, right?

17 A General, two generals and one principle.

18 Q You sure you don't want to change your mind?

19 A I'm sure I don't want to change my mind.

20 Q Tell me on the third paragraph on any of those,  
21 it doesn't matter which. The third paragraph does it say,  
22 Since a proportional relationship exists between the amount  
23 of alcohol in one's breath and in one's blood, the unit  
24 converts breath alcohol concentration to blood alcohol  
25 concentration and displays the results in either grams of

1 alcohol per 100 milliliters of blood or grams of alcohol  
2 per 210 of breath in accordance with the uniform vehicle  
3 code? Does it say that?

4 A Yes, it says that.

5 Q And you just previously testified that the  
6 Intoxilyzer 5000 does not convert breath alcohol  
7 concentration to blood alcohol concentration, correct?

8 A That's correct. It converts it --

9 Q You have a difference of opinion with the  
10 manufacturer, correct?

11 A These numbers are the same.

12 Q Sir, does it say the unit converts breath alcohol  
13 concentration to blood alcohol concentration?

14 A It says, all right. It says that proportional  
15 relationships exist between the amount of alcohol in one's  
16 breath and in one's blood. The unit converts breath  
17 alcohol concentration to blood alcohol concentration and  
18 displays the results in either grams of alcohol per 100  
19 mls of blood or grams of alcohol per 210 liters of breath  
20 in accordance to the uniform vehicle code.

21 Q And you're saying that's incorrect? You're  
22 saying the manufacturer --

23 A I'm saying, I'm saying that the Intoxilyzer --

24 Q No, no. Let me ask you. Yes or no? Are you  
25 saying that's incorrect?

1           A     I'm saying -- okay. This is exactly what it  
2 says. I read it exactly how you have it here.

3           Q     Yes.

4           A     All right.

5           Q     Is it correct?

6           A     It's correct. That's what it says. I just wrote  
7 (sic) it, I just read it. That's what it says.

8           Q     Okay. Is the manufacturer incorrect about the  
9 principle of operation?

10          A     I'm not the manufacturer. You'd have to ask the  
11 manufacturer.

12          Q     Okay. Well --

13          A     I'm telling you that the best results are printed  
14 out in grams of ethyl alcohol per 210 liters of breath.

15          Q     Okay.

16          A     Breath, not blood.

17          Q     All right.

18          A     All right.

19          Q     But it converts from breath, from blood?

20          A     No, it doesn't.

21          Q     It says it converts from blood --

22          A     Okay. Well, whatever this says it does not  
23 convert it to blood first. The actual measurements are in  
24 DMV, DVMS which is a voltage. That voltage is then  
25 converted to whatever units you want it in. DPS converts

1 it into grams of ethyl alcohol per 210 liters of breath.

2 Now, you can take that same DVM result and  
3 convert it into blood because it's the exact same number.  
4 The only difference is what units you're placing on it.  
5 Same units .08 grams of ethyl alcohol per 210 liters of  
6 breath is the exact same concentration a .08 grams of ethyl  
7 alcohol per 100 milliliters of blood. The only difference  
8 is how you tell CMI what units you want.

9 There is no conversion from DVMs to blood to  
10 breath.

11 Q So the manufacturer's statement is incorrect?

12 A You're going to have to ask the manufacturer, but  
13 I'm telling you if this, if this is their document, this is  
14 an old document. It is not converted to blood first, sir.  
15 I've answered this question.

16 Q Every breath testing instrument uses an assumed  
17 blood to breath ratio, correct?

18 A Assumed by the federal government, that is  
19 correct.

20 Q Henry's Law now is a scientific gas law which  
21 explains (inaudible) volatile substances in both liquids  
22 and gasses, right?

23 A That's correct.

24 Q All right. Now, specifically, the law states if  
25 a liquor contains a volatile substance, like ethanol, some

1 of that volatile will escape the liquid and make its way  
2 up in the air above the liquid, right?

3 A That's correct.

4 Q Okay. Now, Henry further explained that in a  
5 closed system eventually the number of molecules escaping  
6 the liquid will equal the number of molecules falling back  
7 into the liquid, right?

8 A Equilibrium.

9 Q That exactly -- that was my next question. It's  
10 called equilibrium, right?

11 A Correct.

12 Q And a system has to be in equilibrium in order to  
13 reliably calculate the amount of volatile substance in a  
14 liquid by measuring the amount of the substance above the  
15 liquid, right?

16 A According to Henry's Law.

17 Q If it's not equilibrium, you won't have a  
18 reliable measurement, correct?

19 A I don't know.

20 Q You don't know?

21 A You'd have to see.

22 Q Okay.

23 A Because scientific measurement trumps theory. In  
24 theory you're correct.

25 Q That's okay.

1 A All right.

2 Q Did you write something for the Arizona Police  
3 Science Journal titled Truth in Science volume one issue in  
4 May 2011?

5 A I did.

6 Q Did you state in there that if it's not in  
7 equilibrium, one cannot reliably calculate the amount of  
8 volatile substance in the liquid by measuring the air above  
9 the liquid?

10 A Something to that effect. And I was stating what  
11 Henry's Law states.

12 Q Something to that effect. So --

13 A Well, if you want me to read it verbatim --

14 Q -- let me ask you the question again.

15 A -- I will, but I didn't memorize what I wrote.

16 Q I'm sorry.

17 A Something to that effect.

18 Q When it's Arizona Police Science Journal Truth in  
19 Science and I read it verbatim, I expect it to be truth in  
20 science. Do you expect it to be something different?

21 A You can tell me or read it verbatim. You just  
22 told me this is what you said and you said, blah, blah,  
23 blah, blah and I said, Yes, something to that effect, I  
24 said. And I was speaking of Henry's Law. And I told that  
25 according to Henry's Law --

- 1 Q Let me ask you --
- 2 A -- it needs to be a sealed container.
- 3 Q So let me ask you the question.
- 4 A Go ahead.
- 5 Q If it's not in equilibrium, one cannot reliably  
6 calculate the number of a, of a volatile substance in the  
7 liquid, or the amount of volatile substance in the liquid  
8 by measuring the air above the liquid, correct?
- 9 A According to Henry's Law.
- 10 Q Right. And according to you in the --
- 11 A According to Henry's Law --
- 12 Q -- Science Journal?
- 13 A According to Henry's Law.
- 14 Q Okay. So if you change the pressure of that  
15 closed system, you change the measurement, right?
- 16 A Is it a closed system?
- 17 Q Yeah.
- 18 A Yes.
- 19 Q Okay. The human respiratory system is not a  
20 closed system, is it?
- 21 A That is correct.
- 22 Q I mean, if I were to --
- 23 A We will die.
- 24 Q Yeah. If I were to close your respiratory system  
25 like with a bag over your head, you'd stop breathing?

1           A     I would still breathe. Well, eventually I would  
2 stop breathing, you're right, yeah.

3           Q     Now, there was a correlation study with over  
4 21,000 subjects that calculated the average partition ratio  
5 to be 2440 to 1 that you mentioned, correct?

6           A     The New Zealand study.

7           Q     Yeah. That was Mason and Dubowski, breath  
8 alcohol analysis uses methods some remaining problems  
9 (sic), Journal of Forensic Sciences.

10          A     Beg your pardon? I didn't hear what you were  
11 saying.

12          Q     Was that Mason and Dubowski?

13          A     No, that was the New Zealand study.

14          Q     Okay. Now, an average -- you choose to rely upon  
15 that, right?

16          A     It was a good study. Twenty-one thousand, over  
17 twenty-one thousand subjects. That's a huge study.

18          Q     Yeah, 2440 to 1.

19          A     True.

20          Q     Yeah. Big. New Zealanders.

21          A     New Zealanders. Good drinkers.

22          Q     In an average of 2215 to 1 was found in four  
23 different studies, Dubowski, Moore, Jones and Simpson,  
24 right? And you even quoted them in your, you even  
25 reference them.

- 1           A     Did I?
- 2           Q     Yeah.
- 3           A     I don't memorize everything I write.
- 4           Q     Well, there are four other studies; is that  
5 correct?
- 6           A     There are hundreds of thousands of studies out  
7 there.
- 8           Q     Okay.
- 9           A     If I quoted them in there, then all right. But I  
10 don't have every single one of these things memorized.
- 11          Q     Okay. Twenty-two-fifteen to one is what they  
12 found in Dubowski, Moore, Jones and Simpson, right?
- 13          A     All three of those cooperated on one study?
- 14          Q     No. Four different studies.
- 15          A     Oh, four different studies.
- 16          Q     Yeah.
- 17          A     I'd have to take a look at each one of those  
18 studies.
- 19          Q     You'd have to look at each one of those studies?
- 20          A     I would. To find the exact number.
- 21          Q     Okay. Now, it really doesn't matter how many  
22 studies have been done. I mean the fact remains that it is  
23 impossible to know any one person's exact partition ratio  
24 at any given time, correct?
- 25          A     Correct.

1 Q And you believe that the use of 2100 to 1  
2 partition ratio benefits the mass, vast majority of  
3 defendants, right?

4 A That's correct.

5 Q Okay. Including those that are actually under  
6 the limit of .08, but have a partition ratio that causes  
7 them to be wrongly convicted you believe it benefits those  
8 defendants as well?

9 MR. MILLS: Objection as to wrongly convicted.

10 MR. NESCI: Correct?

11 THE COURT: What's your objection?

12 Argumentative? Sustained.

13 BY MR. NESCI:

14 Q Well, let me ask you. Does it benefit those  
15 people who actually have a, who actually have a partition  
16 ratio that causes them to be, thought to be over the limit  
17 when they're actually under the limit? Does it benefit  
18 those people?

19 A I think my point was that it, the 2100 to 1  
20 underestimates the vast majority of the people. Now,  
21 obviously, there have been people out there whose partition  
22 ratios have been measured to be 1750, 1800. So by the  
23 assumption of a 2100 to 1 ratio, yes, indeed, you do  
24 overestimate what is in their blood.

25 Q You're familiar with the --

1           A     But you don't underestimate what's in their  
2 breath.

3           Q     You're familiar with -- well, breath is a waste  
4 product, right?

5           A     No.

6           Q     Well, the alcohol in a breath is waste product?

7           A     What do you mean by waste?

8           Q     Well, it wasn't used in the body, right?

9           A     The breath was used in the body.

10          Q     Well, what about the alcohol that's in the  
11 breath? That's a waste product. The body is expelling it  
12 before it gets anywhere.

13          A     You know, what's your definition of waste? So  
14 the waste product is something that the body doesn't need?

15          Q     Yeah.

16          A     Okay. Then it's a waste product.

17          Q     You're familiar with Gary's Medical Legal Aspects  
18 of Alcohol, Fifth Edition, aren't you?

19          A     I don't have it memorized,

20          Q     But you're familiar with it, right?

21          A     Yeah.

22          Q     You refer to it, right?

23          A     I have not yet; no.

24          Q     Okay. You know it's used at the Borkenstein  
25 School as the new text, correct?

1 A No, I did not know that, no.

2 Q You don't know that?

3 A I didn't know that. It's been a while since I've  
4 been to Borkenstein.

5 Q Are you familiar or do you recognize this as a  
6 learning treatise?

7 A A learning treatise. There are a lot of good  
8 articles in it.

9 Q Well, do you?

10 A There are a lot of good articles in it.

11 Q Do you recognize --

12 A No one is going to agree with everything that's  
13 in every book.

14 Q Okay. I'm showing you -- look at page 407. I'll  
15 hand you the book and a photocopy of it which have been  
16 marked as defense Exhibit E. Why don't you go to 407.

17 MR. MILLS: Can I have a copy?

18 MR. NESCI: Here's a copy for Mr. Mills.

19 BY MR. NESCI:

20 Q There would be a graph there. Do you see the  
21 graph?

22 A I do see the graph.

23 Q And tell me, that graph shows simultaneous blood  
24 and breath measurements, correct?

25 A Blood and breath, alcohol concentrations after

1 (inaudible) of alcohol to subject at about 15 minutes into  
2 absorption, the breath overestimates blood by almost four  
3 times. Even at 90 minutes the subject's breath is about  
4 .090, while the subject's blood is significantly under the  
5 per se limit of .070.

6 Q Okay. And, sir, the translation of Widmark in  
7 1981?

8 A Reproduction with permission from Widmark 1981.

9 Q So we have an instance here of a person whose  
10 blood to breath partition ratio -- well, let's see. The  
11 blood being the dash line always throughout the entire  
12 curve underestimates the breath, correct?

13 A According to your graph here? Yes.

14 Q Yeah. Well, according to Widmark's graph here.

15 And you said that about 15 minutes into  
16 absorption the breath overestimates the blood by almost  
17 four times?

18 A That's what I read. Breath overestimates blood  
19 by almost four times.

20 Q And in about 90 minutes the subject's breath is  
21 about a .090 while the subject's blood is significantly  
22 under the per se limit of about a .07?

23 A Yeah. I just read that.

24 Q So somebody's partition ratio isn't always --  
25 well, here we have a real person in Exhibit E for Widmark

1 and here we have a graph that you drew out of your mind  
2 here which doesn't represent any particular person, right?

3 A That represents the vast majority of the people  
4 that I've seen in studies.

5 Q Name them. Name the people. I mean, come on.

6 A Toby Bohler (ph). Do you want me to go through  
7 the people in the laboratory that I brought in and done  
8 drinking studies with?

9 Q Let's just say that that could be right or this  
10 could be right, correct?

11 A I have no idea what that's from. You've shown me  
12 a picture out of a book.

13 Q Do you distrust Widmark?

14 A I have to read the study. Because there are some  
15 studies published by reputable sources, Dubowski, for  
16 instance, has several flawed studies out there. I would  
17 have to see what that study, what he measured, how he  
18 measured it in order to draw conclusions from it. I just  
19 can't take a look at one graph from a study published way  
20 back when and say, oh, this is gospel truth. Won't happen.

21 Q Well, Dubowski said that when a blood test is  
22 available, a breath test is always discriminatory because  
23 the status of absorption is unknown, correct?

24 A You'd have to ask Dubowski.

25 Q You've never heard that?

- 1           A     No.
- 2           Q     Goldberg didn't say that, right?
- 3           A     You'd have to ask Goldberg.
- 4           Q     Goldberg's a cop, right?
- 5           A     He's a retired criminalist from Washington state  
6 right now.
- 7           Q     Sergeant Rod Goldberg, correct?
- 8           A     He's no longer part of the force.
- 9           Q     A person's body temperature at the time of their  
10 breath test is a common argument made at trial, correct?  
11 For the defense, right? You've heard that before.
- 12          A     I have heard that before.
- 13          Q     Body temperature affects the partition ratio by  
14 either making it more difficult for the ethanol to leave  
15 the blood or easier, right?
- 16          A     I've stated that already.
- 17          Q     Okay. If a person has a fever, it would be  
18 expected that more ethanol would be leaving the blood and  
19 going into the air and into the lungs, correct?
- 20          A     Stated that already.
- 21          Q     Okay. So that's correct?
- 22          A     That is correct.
- 23          Q     Now, the opposite would be true if a person's  
24 body temperature was below normal, correct?
- 25          A     Correct.

1 Q All right. So, in other words, the higher the  
2 person's body temperature the more likely the possibility  
3 of breath tests being greater than a corresponding blood  
4 test, correct?

5 A If they're in a fevered status, that is correct.  
6 Normal operating body temperatures have been shown not to  
7 affect it.

8 Q But for every degree Celsius above what the  
9 breath machine was calibrated with, the breath alcohol  
10 concentration rises by 6.5 percent over their breath  
11 alcohol concentration at normal body temperature, right?

12 A No.

13 Q Then why did you write it in Arizona Police  
14 Science Journal?

15 A It's 8.6 percent.

16 Q Okay. Let's go with 8.6 percent.

17 A You said 6.5.

18 Q Fantastic.

19 A I'm just helping you.

20 Q The exact percentage increase caused by fevers is  
21 often debated due to lack of scientific articles on this  
22 topic, right?

23 A There have been -- I have stated before, no one  
24 has been studied that has a legitimate viral caused fever.  
25 So, yeah, there is a derf (ph) of scientific information on

1 this.

2 Q Sure. But you would agree that the Journal of  
3 Forensic Science articles are, excuse me, the Journal of  
4 Forensic Science is a well-respected journal, correct?

5 A I would agree with that.

6 Q The articles are peer reviewed before they're  
7 published?

8 A That is correct.

9 Q Other scientists and editors look for problems in  
10 the articles describing experiments before they publish  
11 them?

12 A That is correct.

13 Q Do you refer to the Journal in your line of work  
14 for research?

15 A I do.

16 Q In fact --

17 A Specific articles from the Journal.

18 Q You'd be overjoyed if they accepted one of your  
19 articles, right?

20 A Overjoyed? No.

21 Q No? Now, Hayward, Fox and Hayward. Their study  
22 performed in 1989 indicated an 8.6 percent per degree  
23 Celsius, correct, increase in breath over blood, correct?

24 A That was what I just told you, correct.

25 Q That was published in the Journal of Forensic

1 Sciences, correct?

2 A I do not know that to be a fact. I'd have to go  
3 back and actually pull the article and see.

4 MR. NESCI: Can I have this marked right here.

5 Thank you.

6 BY MR. NESCI:

7 Q I'm showing you what's been marked as defense  
8 Exhibit F as in Frank. Let me take these. These are the  
9 ones back here.

10 MR. MILLS: Do you have a copy, counsel?

11 MR. NESCI: Yeah. Here you go.

12 MR. MILLS: Thank you. What page are you at?

13 MR. NESCI: I'm just asking him to look at it  
14 right now.

15 BY MR. NESCI:

16 Q Defense Exhibit F, do you recognize that?

17 A Actually no. I've never seen this.

18 Q You've never seen it?

19 A No.

20 Q All right. Let's look in a few pages here and  
21 see if you recognize something that's in here.

22 Look at page 8. Entitled Blood and Breath  
23 Alcohol Testing Part One, Michael Sloneker and Ron Sports.

24 A Shorts.

25 Q Shorts.

- 1 A K is kind of silent and sounding like an H.
- 2 Q Okay. But you and him.
- 3 A He and I.
- 4 Q You wrote this, right?
- 5 A I did, yeah.
- 6 Q Oh, co-wrote it.
- 7 A Co-wrote it, right.
- 8 Q Co-wrote it. Okay. Now, that article that you  
9 weren't familiar with, look at page 10, reference number  
10 11, Fox, GR, Hayward, JS, effect of hypothermia on breath  
11 alcohol analysis. Journal of Forensic Sciences, 1989.
- 12 A I didn't say I was unfamiliar with it. I quoted  
13 it. I just told you I didn't, I couldn't remember what  
14 journal it came out of.
- 15 Q Okay. Now you know what journal it came out of?
- 16 A Yeah, if it's right here, I can just read it  
17 right there.
- 18 Q What journal did it come out of?
- 19 A What reference was that again?
- 20 Q Eleven.
- 21 A Eleven. Journal of Forensic Sciences.
- 22 Q Okay. And, now, you told us that the Journal of  
23 Forensic Sciences is a well-respected journal, correct?
- 24 A Define well-respected.
- 25 Q Within the scientific community, people look to

1 it for research articles --

2 A Okay. People look --

3 Q -- for information.

4 A -- to it toward the research articles.

5 Q Okay. Now, you're familiar with the other

6 article, Physiological Aspects of Breath Alcohol

7 Measurement and Alcohol, Drugs and Driving, 1990, by Dr.

8 A.W. Jones?

9 A Did I quote that one, too?

10 Q You're the guy who wrote the article. You don't  
11 know what you quoted?

12 A Like I said, I didn't memorize my article. They  
13 asked me to write it. I wrote it. Gave it to them and I  
14 write a lot of things. Did I quote it in here?

15 Q It's funny. You don't remember a lot of things  
16 you wrote. Is that peculiar?

17 A I write a lot of things.

18 Q Let me ask you, is that peculiar to this  
19 testimony here today or is that just the way you testify in  
20 general?

21 MR. MILLS: Argumentative, Your Honor.

22 THE COURT: Sustained.

23 MR. MILLS: Were you referring, counsel, to  
24 footnote 12?

25 MR. NESCI: Footnote 12. No.

1 THE WITNESS: No.

2 MR. MILLS: Which one was it?

3 MR. NESCI: I'm just referring to Physiological  
4 Aspects of Breath Alcohol Measurement.

5 MR. MILLS: Oh, okay. So we're not on this  
6 article anymore?

7 BY MR. NESCI:

8 Q Now, so you're not familiar with that, am I  
9 right?

10 A I don't recall it, no.

11 Q The article where Dr. A.W. Jones, one of the  
12 premier researchers of the world, concurs with Fox and  
13 Hayward's results; you're not familiar with that one?

14 A Maybe if you could jog my memory.

15 Q No. I'm not going to help you out, sir.

16 Now, in 1950, Harger adopted 34 degrees as the  
17 average and expired breath temperature for humans; am I  
18 correct?

19 A I don't know that to be a fact.

20 Q That will be -- do you remember Harger  
21 (inaudible) Barns estimation of level of blood alcohol  
22 analysis of breath Journal Laboratory And Clinical  
23 Medicine, Volume 36, 1960?

24 A Didn't read it.

25 Q Didn't read it.

1 A No. Not from the 1950s.

2 Q Okay. You remember IACT, right?

3 A VIACT?

4 Q IACT.

5 A IACT. I do remember IACT. Which one?

6 Q You're a member of IACT?

7 A I'm a member of IACT? No, I'm not.

8 Q You're not?

9 A No.

10 Q Do you ever read their newsletters?

11 A Occasionally.

12 MR. NESCI: I'm going to -- I'd like to have  
13 this marked as an exhibit. Here's a copy for the  
14 prosecutor.

15 MR. MILLS: What letter was the Arizona  
16 Political Science Journal?

17 MR. HUGHES: E.

18 MR. MILLS: What exhibit number do they have on  
19 there?

20 MR. HUGHES: E.

21 MR. NESCI: E. E. I'm going to take this back.

22 THE WITNESS: Do you want me to autograph it?

23 MR. NESCI: If you can remember your name, yes.  
24 But considering your testimony, I think that might be a  
25 stretch.

1 MR. MILLS: Can we have that stricken from the  
2 record, Your Honor?

3 THE COURT: Let's strike it all.

4 BY MR. NESCI:

5 Q Are you familiar with this newsletter?

6 MR. MILLS: Is this G, counsel, or which number  
7 are we at, letter are we at?

8 MR. NESCI: I think it's G. Is it G?

9 THE WITNESS: No, I'm not familiar with it.

10 BY MR. NESCI:

11 Q You're not familiar with breath temperature an  
12 Alabama perspective?

13 A No.

14 Q Are you familiar with the Shoconnect (ph)  
15 article?

16 A Beg your pardon?

17 Q The Shoconnect article which they talk about in  
18 here?

19 A No.

20 Q Are you familiar with the first Jones article in  
21 1982?

22 A You're joking, right? That says Jones 1982? Am  
23 I familiar with Jones 1982?

24 Q Well --

25 A He's published a lot of research.

1 Q That would be Jones. How breath testing  
2 technique can influence the results of breath alcohol  
3 analysis.

4 A Oh, I am familiar with that one, yes.

5 Q You're familiar with that. The way these  
6 articles are done in the scientific world --

7 A Yeah.

8 Q -- is they have a little number here like  
9 Shoconnect (inaudible) Jones, for Jones --

10 A Is that what that means?

11 Q Yes. And you just look at the back and it tells  
12 you what the entire article is.

13 A You're pretty smart. You believe it, too.

14 Q Let's talk about this.

15 A All right.

16 Q Would you like to take a chance to read that?

17 A No.

18 Q It's just two pages. No? I'm going to ask you  
19 questions about it.

20 A Go ahead.

21 Q Okay. Well, let's see. This article says  
22 (inaudible) Harger adopted 34 degrees as the average end  
23 expired breath temperature for humans.

24 A Is that your testimony?

25 Q Harger, Forney, Barns, estimation of level of

1 blood alcohol for analysis of breath, Journal of  
2 Laboratory and Clinical Medicine, Volume 36, 1960, pages  
3 306 to 18. Does that sound right to you?

4 A It sounds like English to me. And I understand  
5 the words that you're saying.

6 Q Okay. Now, the range that he recorded was 31  
7 degrees to 35 degrees, correct?

8 A I don't know. I don't have that article.

9 Q You've got the letter right in front of you.

10 A I have a letter from IACT. I would like the  
11 article.

12 Q I'd like you to take the opportunity to take a  
13 look at that.

14 A All right.

15 Q You read the whole thing?

16 A No. I looked at it.

17 Q Would you please read it.

18 A I'm not going to formulate my opinions based on  
19 IACT. I formulate my opinions based on peer reviewed  
20 journals and the science that I have done.

21 Q Okay.

22 A All right.

23 Q That's fine.

24 A Okay.

25 Q You know what a simulator is, right?

1           A     Can you be more descriptive? I know many  
2 different types of simulators.

3           Q     Sure. Like, the (inaudible) 34C. Are you  
4 familiar with it?

5           A     Breath alcohol simulator.

6           Q     Yes.

7           A     Yes.

8           Q     Okay. You know that when a simulator is used to  
9 check breath, the breath testing, it has to hold the  
10 solution at a constant 34 degrees centigrade, it can't vary  
11 by more than plus or minus two, .2 degrees Celsius, right?

12          A     Correct.

13          Q     What's the formula for determining the headspace  
14 value of a gas at 34 degrees based on the alcohol  
15 concentration of the liquid in the simulator jar?

16          A     I don't know it.

17          Q     You don't know it?

18          A     No.

19          Q     Well, if I were to show it to you, would you  
20 possibly recognize it?

21          A     Maybe. I have not done the calculation.

22          Q     Well, let's give it a shot. I mean, you're the  
23 State's expert here, right? I mean, we're talking about  
24 something pretty simple. Finding out the headspace value,  
25 correct?

1 A Go ahead.

2 Q All right. Now, on defense Exhibit A I have, or  
3 Exhibit H, I have written  $X$  divided by  $.121$  times  $.10$   
4 equals  $Y$ .

5 A Yes, you have.

6 Q Okay. Where  $X$  is the value of the simulator  
7 solution, being the liquid. And if we solve for  $Y$ ,  $Y$  would  
8 be the value of the headspace gas. Assume 34 degrees.  
9 Does that sound familiar to you?

10 A No.

11 Q Let me go over your qualifications for a minute  
12 here.

13 You work with DPS, right?

14 A I do.

15 Q Okay. And previous to that you worked at, in San  
16 Diego, the crime lab, right?

17 A I did.

18 Q And what did you do at the crime lab?

19 A Worked in the forensic, alcohol and narcotics  
20 section.

21 Q Did that ever include testing Intoxilyzers with a  
22 simulator? A wet bath simulator?

23 A It did.

24 Q It did. Did you make the solution yourself?

25 A I did.

1 Q Did you ever test the solution to see if it was  
2 right?

3 A I did.

4 Q You tested it by how? Headspace gas  
5 chromatography?

6 A That's correct.

7 Q Okay. All right. And yet you don't know what  
8 the formula is for determining the headspace value of the  
9 gas in a simulator if you know the concentration of the  
10 liquid below?

11 A Liquid below?

12 Q The liquid below, below the headspace.

13 A There's more to it than that.

14 Q So you're saying -- is that the correct formula  
15 or not or you just don't know?

16 A This formula I have not used.

17 Q Okay.

18 A What is the .121?

19 Q It's the constant at 34 degrees centigrade. I  
20 thought you were the chemist here. I'm just a lawyer.

21 A There are no units. It's a number. It's a  
22 meaningless number. We use units.

23 Q Okay. That's fine. If you don't know, that's  
24 okay.

25 A Oh, thank you.

1 Q Now, you'd agree that hyperventilation and  
2 hypoventilation will cause as much as a 15 percent  
3 variation in breath tests, breath test results, correct?

4 A No, I wouldn't.

5 Q You wouldn't?

6 A No, I wouldn't.

7 Q Would you disagree with Jones on that?

8 A I would.

9 Q You would disagree with Jones?

10 A I would. If he said that, I would disagree with  
11 it.

12 Q Okay. And, but, of course, you didn't read  
13 Physiological Aspects of Breath Alcohol Measurement in the  
14 Alcohol, Drugs and Driving Journal, Volume 6, pages 1  
15 through 25, 1990, did you?

16 A I'd have to look at it.

17 MR. NESCI: You know, Judge, I don't have any  
18 other questions for this witness.

19 THE COURT: All right. Mr. Mills, do you have  
20 any redirect?

21 MR. MILLS: Briefly, Your Honor.

22

23

REDIRECT EXAMINATION

24 BY MR. MILLS:

25 Q As far as you were asked questions about a

1 person's breath temperature affecting by 8.6 percent the  
2 value of a breath/blood comparison. Would that be a person  
3 that is outside a certain accepted normal temperature  
4 range?

5 A It would be in the fevered range.

6 Q And that's defined as what? What would be your  
7 studies?

8 A Well, the Cowan study looked at from 96.0 to  
9 99.8. So a degree outside of that normal temperature is  
10 what I would anticipate would be a fever.

11 Q So to affect the breath reading even if compared  
12 to blood, it would have to be something higher than 99.8  
13 degrees Fahrenheit?

14 A That's correct.

15 Q And as far as which reads higher, the breath or  
16 the blood, when it's contemporaneously done, I believe your  
17 previous testimony was that studies show, and at least one  
18 study, 95 percent were in favor of the defendant, was a  
19 lower reading?

20 A Well, the 95 percent confidence (inaudible)  
21 Goldberg saw that a person was either going to be lower at  
22 the time of test or equal to what they were at the time of  
23 driving. So someone's going to be higher at the time of  
24 driving or equal to at the time of test.

25 Q Let me ask you. You said earlier that you had

1 looked at the actual breath test cards in these cases.

2 Did you also read the police reports associated with these  
3 two particular defendants?

4 A I did.

5 Q Was there anything noted by the police officer in  
6 either of these two cases that talks about any abnormal  
7 breathing patterns, temperature, fevers, anything that  
8 you've talked about here today that were actually present  
9 during the time of these breath tests that might possibly  
10 have affected them?

11 MR. NESCI: Objection. Beyond the scope.

12 MR. MILLS: I don't believe it's --

13 MR. NESCI: I didn't discuss any of the  
14 individuals in any of these cases, Your Honor.

15 THE COURT: Sustained.

16 BY MR. MILLS:

17 Q Now, the Fox/Hayward study from 1989, was that  
18 with people who, in fact, did have a fever outside the  
19 parameters you have spoke about beyond 99.8?

20 A No. The Fox/Hayward did not look at people with  
21 an actual legitimate fever. It was just an induced higher  
22 body temperature.

23 Q I'm sorry. Was that hot water --

24 A Yeah. It was the hot tub.

25 Q Hot tub. Okay. Experiment.

1           So to your knowledge there's no study been done  
2 forensically about the effect of an actual virus and a  
3 person having a fever therefrom and then breath testing to  
4 see whether it affects the accuracy --

5           A     No. The study's not been done.

6           Q     -- compared to blood?

7           MR. MILLS: No further examination on redirect,  
8 Your Honor.

9           THE COURT: Let me ask you. Let me be  
10 simplistic for a minute.

11          THE WITNESS: Sure.

12          THE COURT: Comparison of the arterial blood and  
13 the venous blood that's what makes that absorption reading  
14 different because of which blood it's coming out of, I mean  
15 which reading it's coming out of basically. But that  
16 doesn't have to do with partition ratio, right? That's a  
17 separate thing depending on where the breath, where the  
18 reading is coming from basically? I mean where the alcohol  
19 is I guess is my question?

20          THE WITNESS: I see what you're trying to ask.  
21 Yeah, basically, yes, sort of. It has to do with, it has  
22 to do with partition ratio because you are comparing breath  
23 to blood. Okay. Unfortunately, you're comparing arterial  
24 to venous. It would be nice if we could compare venous to  
25 venous and we could drop, get rid of that difference. All

1 right. But there's always going to be the differences  
2 between the venous and the arterial system when you're  
3 looking at breath versus blood. All right. That's one of  
4 the differences. The other difference is it could be  
5 temperature.

6 THE COURT: Okay. All right. Thank you.

7 THE WITNESS: Sure.

8 THE COURT: You can step down.

9 MR. MILLS: That concludes our testimony, Your  
10 Honor.

11 THE COURT: Mr. Nesci.

12 MR. NESCI: I'm ready.

13 THE COURT: Okay.

14 MR. NESCI: I don't know if you want to take a  
15 break or anything, but I'm ready.

16 THE COURT: I'm fine.

17 MR. NESCI: Call Mr. Flaxmayer.

18

19

CHESTER FLAXMAYER,

20 having been first duly sworn upon oath, was examined and  
21 testified as follows:

22

23

DIRECT EXAMINATION

24 BY MR. NESCI:

25 Q Good afternoon, Mr. Flaxmayer.

1 A Good afternoon.

2 Q Thanks for coming down to Tucson.

3 A You're welcome.

4 Q Can you please introduce yourself for the record?

5 A My name is Chester Flaxmayer.

6 Q And what is your occupation, sir?

7 A I'm self-employed as a criminalist. I'm also  
8 employed by the City of Phoenix in the position they call  
9 forensic toxicology expert.

10 Q What's your educational background that allows  
11 you to be a criminalist or a forensic toxicology expert?

12 A Originally I graduated from Arizona State  
13 University in December 1982 with three bachelor of science  
14 degrees. One in chemistry, one in botany and one in  
15 microbiology. Stayed on at ASU to take some additional  
16 graduate classes in the field of analytical chemistry. It  
17 was the chemistry degree that originally allowed me to be  
18 hired by the Arizona Department of Public Safety as a  
19 criminalist in their toxicology section. It was the  
20 college degree that was one of the requirements for me to  
21 be employed by the City of Phoenix.

22 Q But you had three times the number of degrees  
23 they required, correct?

24 A I had three separate bachelor of science degrees.  
25 I could have used any of them to get the job at DPS. I

1 could have used any one of them to get the job with the  
2 City of Phoenix.

3 Q Okay. Now, what's your work history relevant to  
4 being a criminalist?

5 A I worked for DPS from August of '83 through  
6 November of '90. My duties went anywhere from analyzing  
7 blood, breath, urine or other bodily substance to determine  
8 its alcohol content, teaching police officers in the field  
9 about making DUI stops, giving field sobriety tests, how to  
10 run various types of alcohol testing equipment, laboratory  
11 work geared around testing or repair of that equipment,  
12 testifying in court about alcohol, drugs, their effects,  
13 their measurement.

14 Left DPS in '90 forming my own private company  
15 doing the same basic types of work. One exception, I  
16 choose to no longer analyze the biological fluids of blood  
17 or urine.

18 Hired by the City of Phoenix a little more than  
19 four years ago. One of my duties for them is testifying in  
20 court about alcohol, drugs, their effects, their  
21 measurement.

22 Q What breath testing permits do you currently hold  
23 or have you ever held?

24 A Currently hold, I would say from DPS I still hold  
25 an Intoxilyzer model 5000 operator one, operator two and

1 instructor. I've held breathalyzer model 900A operator.  
2 I've held operator one, quality assurance specialist and  
3 instructor for the model 4011, model 4011AS, model 5000.  
4 I've also gone through national training and was allowed or  
5 certified through them for the Intoxilyzer model 8000.

6 Q What's the difference between operator one,  
7 operator two and instructor? Can you tell us what those  
8 three are?

9 A Operator one's the person who runs the test on a  
10 subject. Operator two or quality assurance specialist is  
11 the person who tests the device. The instructor is the  
12 person who teaches the person that allows them to become an  
13 operator one.

14 Q Do you belong to any professional organizations?

15 A Yes.

16 Q Which ones?

17 A Currently I'm a member of the American  
18 (inaudible) of Chemists, the International Association for  
19 Chemical Testing, Canadian Forensic Science Society and the  
20 American Academy of Forensic Science in their toxicology  
21 section, also the International Association of Forensic  
22 Toxicologists.

23 Q What about previously? Are there any that you  
24 were a member of and no longer?

25 A Not that I would consider a scientific

1 organization. I used to be a member of the Arizona  
2 Department of Health Services State Blood Alcohol Advisory  
3 Committee, but that was only part made up of scientists.  
4 I'm still a member of the National Safety Council's  
5 Committee on Alcohol and Other Drugs, but I don't really  
6 consider it to be a scientific organization.

7 Q Okay. Have you served on any boards or  
8 committees?

9 A Sure.

10 Q Which ones?

11 A The two committees that I just mentioned,  
12 Department of Health Services their State Blood Alcohol  
13 Advisory Committee, also National Safety Council's  
14 Committee on Alcohol and Other Drugs.

15 Q Did you play any role in developing Arizona's  
16 breath test regulations?

17 A I was one of the individuals who helped draft the  
18 regulations that used to be in effect. Some of the  
19 language is still followed through, but I had nothing to do  
20 with the writing or the choice to adopt those portions that  
21 match the part that I helped write before.

22 Q Okay. Are you familiar with the Arizona  
23 Administrative Code, Title 13, Chapter 10?

24 A To the extent that a lay person can claim such  
25 knowledge of the regulations of breath and blood alcohol

1 determinations in Arizona I would say yes.

2 Q Can you tell us what the purpose of the AAC,  
3 Title 13, Chapter 10 is?

4 A It covers the regulations for things like the  
5 approval of breath testing devices, the approval of methods  
6 for the analysis of biological fluids, the checklists that  
7 are supposed to be used, the testing that's supposed to be  
8 gone through.

9 MR. NESCI: Your Honor, at this point I'd like  
10 to, under Rule 201(d) of the Arizona Rules of Evidence,  
11 mandatory judicial notice, and ask the Court to take  
12 judicial notice of Title 13, Chapter 10 of the Arizona  
13 Administrative Code so we can talk about it freely as we go  
14 through it.

15 THE COURT: All right. I will do that.

16 MR. NESCI: Okay. Actually, I have a copy here  
17 for the Court. I don't know if it wants -- oh, it is  
18 marked. It's marked as D.

19 THE COURT: Okay.

20 BY MR. NESCI:

21 Q Mr. Flaxmayer, I'm handing you a copy of Title  
22 13. Do you recognize that?

23 A Yes.

24 Q I want you to specifically look at R13-10-103.

25 A All right.

1 Q And I know that's like in fine print.

2 A I have glasses. I can see it.

3 Q Okay.

4 MR. MILLS: I'm sorry. What was that again,  
5 counsel?

6 MR. NESCI: R13-10-103, breath testing devices.

7 BY MR. NESCI:

8 Q Can you tell us what (A) and (B) says?

9 A (A) says the director may approve devices. (B)  
10 says a device shall meet the following standards of  
11 performance and it lists three that it has to be able to  
12 meet.

13 Q Let's talk about the very first standard of  
14 performance that the device has to meet. What does it say?

15 A For R13-10-103(B)(1), breath specimens tested  
16 shall be alveolar in composition.

17 Q Okay. And (B)(2), what does that say?

18 A (B)(2) says the device shall be capable of  
19 analysis if a solution of known alcohol concentration with  
20 an accuracy limit of a systematic error of no more than  
21 plus or minus 0.005 grams per 210 liters of breath or plus  
22 or minus five percent whichever is greater and a precision  
23 limit of an average standard deviation of no more than  
24 0.0042 grams per 210 liters of breath. The accuracy and  
25 precision of the device being evaluated shall be determined

1 on the basis of ten consecutive measurements at four  
2 alcohol vapor concentrations that are between 0.020 and  
3 0.350 grams per 210 liters of breath, to include at least  
4 one value less than 0.100 and one value greater than 0.250.

5 Q Let me ask you some questions based on that.

6 A Okay.

7 Q Would a person be able to blow 210 liters of air  
8 into a machine in one blow?

9 A I would say no human would, no.

10 Q Okay. A human. Yeah. We're talking human here.

11 A Yeah. I figured you were.

12 Q Okay. About how much would an average person be  
13 able to blow if you can give us a range?

14 A I would say I think the largest I've seen  
15 published is in the neighborhood of high five liters.  
16 Somebody may be able to hit six. The instrument requires  
17 at least 2.1. Most people can at least blow three.

18 Q Okay. So why does the Arizona Administrative  
19 Code use the odd measurement of grams of alcohol per 210  
20 liters of breath?

21 A It's been chosen historically because that way  
22 you can use the instrument value as a breath value or, if  
23 you're willing to make a mental jump to the left, you can  
24 use it as a blood value.

25 Q Okay. And what three breath testing devices are

1 currently approved for use in Arizona?

2 A Actually there are four of them. Model 5000,  
3 model 5000EN, the model 8000 and the RBT4.

4 Q Okay. Have you seen Intoxilyzer 5000 manuals  
5 throughout your career?

6 A Yes.

7 Q I'm showing you what's been marked as defense  
8 Exhibits A, B and C. Can you tell me what these are? And  
9 I have the entire manuals here if you need to look at them.

10 A These appear to be portions of Intoxilyzer model  
11 5000 manuals issued by CMI Incorporated. It looks like its  
12 three separate revisions of their operator's manual.

13 Q Okay. Do they appear to be accurate copies of  
14 portions of the manuals?

15 A I would say yes.

16 Q Okay. Can you take a look at either principles  
17 of operation or general information. I know they're  
18 different from one to the next.

19 A Got it.

20 Q And tell us what it says with the sentence  
21 beginning with, Since a proportional relationship.

22 A Since a proportional relationship exists between  
23 the amount of alcohol in one's breath and in one's blood,  
24 the unit converts breath alcohol concentration to blood  
25 alcohol concentration and displays the result in either

1 grams of alcohol per 100 milliliters of blood or grams of  
2 alcohol per 210 liters of breath in accordance with the  
3 Uniform Vehicle Code.

4 Q So when the government introduces a breath  
5 alcohol reading from an Intox 8000, they're really  
6 introducing a BAC result, a blood alcohol result, which has  
7 been converted from a breath alcohol estimation; am I  
8 correct?

9 A Yeah. You can look at it that way. It's chicken  
10 or the egg. You're using a value that the instrument has  
11 measured. It's representative as both a breath and a  
12 blood.

13 MR. NESCI: Your Honor, I'd like to move for  
14 admission of A, B and C for the record.

15 THE COURT: Any objection?

16 MR. MILLS: No objection.

17 THE COURT: All right. A, B and C will be  
18 admitted.

19 BY MR. NESCI:

20 Q Now, R13-10-103(B) says that breath specimens  
21 tested shall be alveolar in composition.

22 A Yes.

23 Q Tell me, is a breath specimen that is alveolar  
24 composition possible to obtain from a living human?

25 A I would say no.

1 Q Why not?

2 A Alveoli are the last little sac in the lung where  
3 air is moving around near it, it's in equilibrium with it,  
4 but it is surrounded by capillaries that go ahead and allow  
5 gas exchange. You can't exhale that last part of the  
6 breath. If you could exhale all of the air in the alveoli,  
7 the alveoli would collapse. So the most you can get is  
8 proportionate to alveolar. You can't get a true alveolar  
9 sample.

10 Q Okay. So -- well, does the Arizona  
11 Administrative Code define the term breath anywhere?

12 A No.

13 Q So if it's no alveolar in composition, what makes  
14 up the sample?

15 A Well, it's a sample of breath that comes prior to  
16 the alveoli in the lung chain. Realize you have esophagus,  
17 goes down to the bronchi, splits off to bronchials and then  
18 it keeps branching into smaller and smaller and smaller  
19 chambers. At the end of each of these branches ultimately  
20 is an alveoli. We're getting the breath that is coming  
21 before those individual sacs. It is in all likelihood and  
22 equilibrium with those sacs, but it is not alveolar breath.

23 Q Okay. Now, Arizona Revised Statute 28-  
24 1381(A)(2), you're familiar with that, correct?

25 A Again, to the extent a layperson can claim such

1 knowledge, yes.

2 Q Okay. It states that it is unlawful for a person  
3 to drive or be in actual physical control of a vehicle in  
4 this state under any of the following circumstances. Two,  
5 if the person has an alcohol concentration of .08 or more  
6 within two hours of driving or being in actual physical  
7 control of a vehicle and the alcohol concentration result  
8 in alcohol consumed either before or while driving or being  
9 in actual physical control of a vehicle. Does that sound  
10 familiar to you?

11 A Yes.

12 Q If we have a person who drank before or while  
13 driving, as is contemplated by the statute, and was  
14 arrested for DUI and tested, is it possible that the breath  
15 test estimated alcohol concentration is not the result of  
16 alcohol consumed prior to or while driving?

17 A Well, no. It comes from alcohol that is  
18 consumed --

19 Q The alcohol --

20 A -- but it's possible that it may not be an  
21 accurate representation of the amount of alcohol that the  
22 individual consumed.

23 Q Right. The alcohol concentration?

24 A Right.

25 Q Okay.

1           A     In terms of being able to use the concentration  
2 to figure out what the individual consumed.

3           Q     Sure.

4           A     Yes.

5           Q     Clearly the alcohol, if I gave you the facts, a  
6 person drank before or while driving, clearly alcohol came  
7 before or while driving?

8           A     Correct.

9           Q     But the accuracy of that alcohol concentration is  
10 what we're talking about?

11          A     I agree.

12          Q     Okay. And what about if alcohol is trapped in  
13 the mucous linings of the esophagus? Can that play any  
14 part in a breath test result?

15          A     Yeah. It is part of the alcohol that is making  
16 it into the sample as the individual is exhaling into an  
17 Intoxilyzer.

18          Q     So when we talk about a blood to breath ratio,  
19 we're talking about blood to breath. We're not talking  
20 blood to mucous to breath, right?

21          A     We're talking about taking a blood reading.  
22 We're talking about taking a breath reading on two separate  
23 devices. We divide one by the other and we get a numerical  
24 estimate of a ratio.

25          Q     Okay. So the alcohol that's trapped in the

1 mucous linings of the esophagus is not a blood alcohol  
2 concentration, correct?

3 A I would agree.

4 Q And some of that can end up in a breath sample,  
5 correct?

6 A Some of that does end up in a breath sample, yes,  
7 sir.

8 Q And if it ends up in a breath sample, I would  
9 assume it does not lower the breath sample. I would assume  
10 adding alcohol raises the breath sample?

11 A Correct. That's what we would expect.

12 Q Okay. And that's not partition ratio, correct?

13 A Well, because it is measured, or because it is  
14 part of the value in the breath, it is ultimately  
15 calculated in when a partition ratio is being measured in a  
16 human subject.

17 Q Got it. Now, are there changes in partition  
18 ratio from person to person? I mean, does everybody have  
19 the same partition ratio?

20 A The literature tells us that everybody does not  
21 have the same partition ratio. The literature tells us  
22 that the same person does not have the same partition ratio  
23 from moment to moment. Since it's the amount of alcohol in  
24 the blood divided by the amount of alcohol in the breath,  
25 and those both change over time, the ratio changes over

1 time as well.

2 Q Now, that's all based on Henry's Law, right?

3 A Our using a partition ratio is based on Henry's  
4 Law.

5 Q Okay. Does the partition ratio change as the  
6 person's blowing into the machine?

7 A Theoretically, yes, but nobody's ever really been  
8 able to do the experiment. They always do it by measuring  
9 what's in the blood at a given instant, what's in the  
10 breath at a given instant, dividing it gives us a number.

11 Q Okay. And theory is based on the fact that  
12 Henry's Law is based, it's Henry's Law of partial  
13 pressures, correct?

14 A Henry's Law includes the concept of partial  
15 pressures. They say the weight of the gas is proportional  
16 -- or sorry. The weight of a solute in a liquid is  
17 proportional to its pressure.

18 Q Okay. So if I change the pressure, I can change  
19 the concentration of the gas?

20 A Correct.

21 Q And as I'm breathing out say into an Intoxilyzer  
22 8000, I would be changing the pressure in my lungs,  
23 correct?

24 A Yeah, to a certain extent, you are.

25 Q And so when we're talking about partial pressure

1 that's why the theory is that it changes partition ratio  
2 as you blow, correct?

3 A That is one of the things you could be looking  
4 at, yes.

5 Q Since breath is not, is not defined by the  
6 Arizona Administrative Code if I just sit here and I go  
7 whew, is that a breath?

8 A Yes.

9 Q Okay. If I have alcohol in my system, in my  
10 blood and I'm fully absorbed and I give a short blow like  
11 whew, or I blow really long into an Intoxilyzer, am I going  
12 to have a different result?

13 A Yes.

14 Q Okay. How does a person provide a proper breath  
15 sample for breath testing purposes?

16 A The individual is supposed to be deprived of  
17 alcohol for 15 minutes immediately preceding the  
18 (inaudible) of the test. From a science perspective, no  
19 eating, no drinking, no foreign objects in the mouth, no  
20 vomiting, no regurgitation. The individual is supposed to  
21 take a breath and immediately blow that into the  
22 instrument. Ideally we want that person to blow as long as  
23 they possibly can until they basically run out of air.

24 Q So that would logically mean a person would have  
25 to have been breathing prior to giving the sample?

1           A     It's pretty hard to exhale if you haven't been  
2 breathing, correct.

3           Q     So that would mean a person would have to have a  
4 pattern of breathing prior to providing a sample, right?

5           A     Correct.

6           Q     Have you ever administered a breath test?

7           A     Yes.

8           Q     Can you give us an idea, a ballpark figure of how  
9 many if you can?

10          A     Hundreds.

11          Q     All right. Is your experience that everyone  
12 breathes in exactly the same pattern when blowing into a  
13 breath test machine even if instructed?

14          A     No.

15          Q     What differences have you noted?

16          A     I've seen individuals who will hyperventilate.  
17 I've seen individuals who hold their breath. I've seen  
18 individuals who try and provide as short a sample as they  
19 possibly can, try and blow as long as they possibly can.  
20 And just about all variations in between.

21          Q     Now, as an operator -- how many operators do you  
22 think you've trained?

23          A     I taught more than a hundred classes for  
24 operators. It was rare for me to teach a class with fewer  
25 than 15 students. It was rare for me to teach a class with

1 more than 40. So figure at least 1500 over the years.

2 Q Okay. So as somebody who's trained many other  
3 operators, has it been your experience that an operator can  
4 always discern differences in breathing patterns from one  
5 sample to the next?

6 A No.

7 Q Does the manner in which one breathes prior to  
8 and while giving the sample of breath affect the breath  
9 estimate?

10 A Yeah. If we're just looking at the breath  
11 alcohol concentration itself, how you breathe and how you  
12 blow into the instrument changes the reading that you  
13 obtain on the instrument. It changes your breath alcohol  
14 concentration.

15 Q But it doesn't change the blood alcohol  
16 concentration?

17 A Right. Blood should basically remain the same.

18 Q Okay. And you've testified that you can't  
19 always, it's been your experience you can't always tell if  
20 somebody's breathing exactly as instructed, correct?

21 A Right. Because the breath is invisible so it's  
22 pretty hard for you to tell what the individual is doing in  
23 terms of their breathing.

24 Q How and why does it affect the estimate?

25 A Alcohol is being transferred from the blood, from

1 the mucous lining into the breath, but it is in part a  
2 physical contact. You inhale air in. As that air comes  
3 in, it starts stripping alcohol out of the mucous lining,  
4 it goes down into the lungs and it continues to strip  
5 alcohol out of that air that is in equilibrium with the  
6 blood. It's, basically, and one way to look at it, pulling  
7 it out of the blood. You then go ahead and exhale and that  
8 now comes back up and the opposite process occurs. As it  
9 moves up, some of that alcohol leaves the breath and goes  
10 into the mucous lining and fills that mucous lining. You  
11 then exhale whatever is left.

12           It's then giving you the amount of alcohol that  
13 it has picked up and not yet deposited back into the mucous  
14 lining. You used the term for it waste product. I agree.  
15 You're exhaling it out into the room. It's gone at that  
16 point.

17           Q     By how much can it affect the estimation that is  
18 reported?

19           A     There are studies on human volunteers where they  
20 took an individual, dosed them with alcohol, let them blow  
21 into the instrument while breathing normally, let them  
22 hyperventilate or let them hold their breath. The studies  
23 on those volunteers show that you can change the instrument  
24 reading by up to plus or minus about 15 percent.

25           Q     And, again, some of that is coming from the

1 mucous lining, am I correct?

2 A Yes. Some of it is. We just have no way of  
3 telling you how much of it is.

4 Q Is there any literature -- I know Mr. Sloneker  
5 was unfamiliar with this -- but is there any literature  
6 which supports that hyper and hypoventilation affects  
7 breath test estimations?

8 A Well, Jones has published it, NHTSA has published  
9 it. Some of the original -- if you go back into the  
10 original literature in the 30s, 40s and 50s about breath  
11 testing, about the effects of temperature of the air and  
12 how the individual breathes, you go look at the early  
13 studies that were done, whether you have a person who blows  
14 in expiratory or re-breathes, give them a paper bag and  
15 have them inhale, exhale, inhale, exhale into the paper  
16 bag, so you're re-breathing the air. By doing that you're  
17 equilibrating all of that alcohol out to a consistent  
18 value. That type of literature showed that how you  
19 breathe, if you are blowing in expiratory breath will  
20 affect your reading on a breath test.

21 Q Okay. Now, you used the term NHTSA and I know  
22 somebody in a higher court is going to be reading this  
23 transcript. Can you please tell us what NHTSA is for the  
24 record so somebody doesn't have to guess?

25 A NHTSA is the National Highway Traffic Safety

1 Administration. They're an arm of the U.S. Department of  
2 Transportation.

3 Q Thank you.

4 Now, even where a person gives a proper breath  
5 sample as instructed by a trained operator, can subtle  
6 differences in breathing patterns cause any fluctuation  
7 from sample to sample?

8 A I would say yes.

9 Q Let's talk about temperature. Does temperature  
10 of a human affect, or the subject affect the breath test  
11 estimates?

12 A I would say yes.

13 Q Does it affect every breath test estimate?

14 A Yeah. Temperature has some role to play in all  
15 tests that are blown that are breath tests.

16 Q How does it affect a breath test estimate?

17 A As was mentioned before, your body is at some  
18 preset temperature. The amount of alcohol that leaves the  
19 blood is a function of that temperature. The colder your  
20 body is the more remains a liquid, the hotter your body is  
21 the more of it becomes a gas. It is in part that force  
22 that drives alcohol out. It's that alcohol that we are  
23 measuring in the human subject. So your temperature  
24 affects your reading the same way in a simulator the  
25 temperature of the simulator affects the reading.

1 Q Now, Mr. Sloneker was saying that, well, there  
2 haven't been any studies done with a viral temperature,  
3 correct?

4 A There have not been. I agree. He also said  
5 that. I agree.

6 Q Yeah. Tell me, does the alcohol that's inside  
7 the body know whether the temperature is increased because  
8 of a virus or because they've been immersed in a hot tub?  
9 I mean, is this intelligent life we're talking about here?

10 A Anthropomorphically the body does not know, the  
11 alcohol does not know. The medically accepted way of  
12 changing a person's body temperature to perform an  
13 experiment, and it's been used for 40 or 50 years, is water  
14 immersion.

15 There is no ethical program that will allow you  
16 to take the cell wall of a virus and inject it into a  
17 person to force their temperature to change.

18 The second problem you run into is you need the  
19 temperature to change and be consistent for long enough for  
20 you to be able to measure it and see what affect it has.  
21 That's the advantage of the water bath. We can make it  
22 cold and we can set you at a set temperature. We can make  
23 it hot and set you at a set temperature. You can't do that  
24 with a virus or a bacteria. It's not going to work.

25 Q So we don't give people smallpox or measles or

1 something to experiment on them for this?

2 A Not for that. They've done it for other things,  
3 but there is no routine protocol that I've seen that's  
4 going to make it through an RIB, sorry. That's going to  
5 make it through a university board that allows and  
6 determines ethical experimentation on humans that's going  
7 to let you inject them with some virus to increase their  
8 temperature as part of a breath alcohol determination test.

9 Q So that's a distinction without a difference  
10 whether it's a viral temperature or whether it's induced by  
11 putting somebody in a hot bath; am I correct?

12 A I can't tell you it's a difference without a real  
13 meaning. We don't know. We're never going to know because  
14 they're never going to let us do one on a virus. We'd like  
15 it to be done, but it's not going to happen in the United  
16 States. So, short of the next coming of some emperor some  
17 place who says we're going to experiment on you this week,  
18 we're never going to be able to make that final leap into  
19 telling us what happens on that ill individual.

20 Q Now, every breath tester in the United States is  
21 calibrated -- let me ask you. Are breath testers  
22 calibrated using any particular temperature?

23 A Ones in the United States that are purchased with  
24 federal funds most states use a 2100 to 1.

25 Q Okay. What about temperature?

1           A     Thirty-four degrees centigrade if they are  
2 using a water bath. It's what the instrument is set for  
3 and how the instrument would generally be if they are using  
4 a water bath calibrator.

5           Q     Is that what they get when a human provides a  
6 sample? Thirty-four degrees centigrade?

7           A     They can get values below that or above that.  
8 Thirty-four degrees centigrade was picked by a committee  
9 back in the 50s. It was adopted by the federal government.  
10 We still have it today.

11          Q     I'm showing you what's been marked as defense  
12 Exhibit G. Mr. Sloneker didn't recognize this, but tell me  
13 if you recognize defense Exhibit G.

14          A     I do.

15          Q     Can you tell us what that is?

16          A     It's a portion of a newsletter from the  
17 International Association for Chemical Testing. This one  
18 is Volume 9, Number 2, July of 1998. It includes an  
19 article called Breath Temperature an Alabama Perspective by  
20 two individuals by the name of Dale A. Carpenter and  
21 James M. Butram. Two individuals who use an instrument  
22 that measurements the end expiratory breath temperature of  
23 a person and then uses it as part of the calculation. If  
24 your temperature is higher than 34 degrees, the instrument  
25 lowers the reading.

1 Q Okay. Well, in there, I was looking at this  
2 and we have Harger 1950 adopting 34 degrees centigrade. Do  
3 you see that?

4 A Yes.

5 Q What was the range of people in his test?

6 A This shows 31 to 35. I don't recall. I'd have  
7 to go back and read the article.

8 Q Okay. How many subjects were in this test?

9 A This shows six.

10 Q Does that sound right?

11 A Yeah. It was pretty hard to measure things like  
12 end expiratory breath temperature. There was no off the  
13 shelf equipment to be able to do it. Even when Dubowski  
14 published his in '75 with 55 subjects, there still was no  
15 off the shelf equipment to measure breath temperature.

16 Q Okay. Now, Harger's 34 degrees with six  
17 subjects, I mean, that 34 degrees became the basis for  
18 calibrating machines in the United States, correct?

19 A Well, it wasn't just him, but there were a group  
20 of scientists from that era that included people like  
21 Borkenstein, Dubowski, Rolla Harger. It would include  
22 their group of other people who got together and, based on  
23 the literature, were willing to agree to 34 degrees. There  
24 were people who whined that it could be higher and maybe  
25 should be higher, but they were willing to adopt as a

1 committee 34 degrees. The federal government adopted it  
2 sometime thereafter.

3 Q In 1995 along came a guy named Shoconnect, if  
4 that's how you pronounce it.

5 A Yeah. I don't know.

6 Q Okay. How many people were in his test?

7 A Seven hundred.

8 Q And what temperature did he find?

9 A He found an average of 35.

10 Q Tell me, in 1995 was the ability to measure an  
11 expired breath temperature better or worse than it was in  
12 1950 or 1941?

13 A Better. There was now commercial equipment, or  
14 there was then commercial equipment that you could purchase  
15 that had the capacity to measure the temperature of the gas  
16 stream.

17 Q Okay. And what about subject sample size? I  
18 mean, if you're going to do this type of study, would you  
19 want 6 people in it or would you want 700?

20 A No. The larger the numbers are the better. The  
21 studies done in this era, back -- because they were saying  
22 the population in the United States was about 230 million.  
23 One study said 238 million. They wanted about 238 subjects  
24 or more.

25 Q Okay. Do you think that number is valid?

1 Shoconnect's number, 35 degrees centigrade?

2 A There's other research. If you look at some of  
3 the older research, it includes that value. One of  
4 Harger's studies had 35.1. The instrumentation that  
5 Carpenter used came up with 35 as well. So I don't think  
6 there's anything that would say it is an incorrect number.  
7 The most I can say is it seemed to be the average value for  
8 those subjects they tested.

9 Q Okay. Now, I've heard mention of statistics from  
10 Alabama, I think it was over 10,000 people in a database.  
11 Have you heard of that?

12 A Sure.

13 Q Can you give us an idea of what those statistics  
14 show?

15 A They had an average temperature of 35 degrees  
16 centigrade. They had a maximum of 37 degrees centigrade, a  
17 minimum of, as I recall, 33 degrees centigrade. So that  
18 was their, the majority of their data fit within that  
19 range.

20 Q Who were these subjects?

21 A In Alabama they were individuals, the vast  
22 majority of them were individuals who'd been arrested for  
23 suspicion of driving while under the influence. The  
24 instrument they used when they were tested not only  
25 measured their alcohol concentration, but it measured their

1 end expiratory breath temperature, recorded the results.

2 Q Are we assuming that -- how many people did you  
3 say was in that database?

4 A My recollection is it was about 17,000, but I'm  
5 doing that off the top of my head. I'd have to actually  
6 look at his later article to see.

7 Q Well, would it be fair to say that all 17,000 of  
8 those people had some kind of virus or something that  
9 causes their temperature to be elevated?

10 A I don't think most people would consider, even if  
11 you come from Alabama it means you have a virus.

12 Q Okay. Is there something peculiar to people from  
13 Alabama that would raise their temperature to 35 degrees  
14 from 34?

15 A No. We would expect them to be the same type of  
16 people that exist anywhere else, all of the Alabama jokes  
17 notwithstanding.

18 Q So does one have to have a fever to have a 35  
19 degree end expired breath temperature?

20 A I would say no.

21 Q Would that be considered normal?

22 A Yeah. Based on this data that we've seen for the  
23 groups that they have done, I would say yes.

24 Q Okay. Now, Mr. Sloneker told us that each degree  
25 centigrade of variance equates to 8.6 percent variance in

1 the breath test result. Does that sound right to you?

2 A Fox and Hayward when they did their studies for  
3 cooling people down and warming people up came up with 8.6  
4 percent. Harger when he did the blood came up with about  
5 6.8 percent. He just took blood itself and heated it to 34  
6 degrees and then measured it. As it increased in  
7 temperature, he came up with 6.8 percent. The only human  
8 experiment on living humans was Fox. He was 8.6.

9 Q Okay. I'm going to grab some water while I ask  
10 you this question. Can you tell me, how did they do that  
11 experiment?

12 A They had a group of volunteers. They were  
13 brought into a laboratory situation. They were dosed with  
14 varying amounts of alcohol. At particular times their  
15 temperature was measured. They euphemistically called it a  
16 ten centimeter in blowing rectal probe. At the same time  
17 they were measuring temperature, they were, on occasion,  
18 measuring blood, they were measuring the amount of alcohol  
19 in the breath and they were looking at how, as they changed  
20 the person's core body temperature, they changed the amount  
21 of alcohol that was in their breath in relation to their  
22 blood. Did it for one group of volunteers as they put them  
23 in cold water and lowered their temperature. Did it for a  
24 second group of volunteers -- group one did not come back  
25 -- they went into the hot tub and it was as the water

1 warmed up.

2 Q And the blood alcohol concentration did not  
3 change, but the breath did?

4 A Yeah. The only changes in blood were changes in  
5 blood due to metabolism. Once they went ahead and  
6 corrected for that, they then were looking solely at  
7 differences in breath alcohol versus blood alcohol for  
8 temperature. They were looking at how much the breath  
9 alcohol changed.

10 Q Did some of that change of breath alcohol  
11 possibly come from mucous linings? In other words, being  
12 the mucous that are being heated up and releasing extra  
13 breath alcohol?

14 A That's one of the concerns that some people have  
15 had about the studies is because one of them was done in a  
16 hot tub. That means you have warm water and you also have  
17 warm air that has more humidity in it and that that may  
18 have affected some of the test results. Although if you  
19 realize that Harger came up with 6.8 percent for blood, I  
20 don't think we're talking about a significant difference in  
21 terms of 6.8 using blood versus 8.6 in a person.

22 Q Jones wrote about the Fox and Hayward study,  
23 correct?

24 A Yeah. After it came out, he wrote articles  
25 talking about the same general concept although he didn't

1 do the same type of experiment. But he talked about  
2 physiological variables that existed and cited Fox as one  
3 of the ones who had published it.

4 Q Okay. Now, can you put this in real terms for  
5 us? Let me give you some numbers here. Suppose we have an  
6 individual with a true alcohol concentration of .075.

7 A Now, breath or blood or both?

8 Q Blood.

9 A All right.

10 Q And an end expired breath temperature of 35  
11 degrees centigrade.

12 A All right.

13 Q By how much would the effect of temperature  
14 distort that person's breath test estimate?

15 A If we assume that when we say the person had an  
16 oh-seven-five blood, we pretend that he is that  
17 hypothetical person that the instrument is set for. When  
18 his temperature was 34 degrees he would blow .075. If we  
19 changed his temperature to 35 degrees centigrade, his  
20 reading would go up to somewhere between .080 and .081.

21 Q So from under the limit to over the limit?

22 A Correct.

23 Q Are you familiar with the Cowan study?

24 A Yes. Johnny Mac. I am.

25 Q Can you tell us were there any problems or issues

1 with that?

2 A I believe there are, yes.

3 Q Can you tell us what they are?

4 A Sure. One of the simple problems, we're using an  
5 instrument that people may argue as to how precise it is.  
6 Some people say plus or minus ten percent. Some people say  
7 it's better than that. But even if you want to say it's  
8 wonderful and it's good to plus or minus five percent,  
9 there is instrumental error involved. We're looking at  
10 partition ratio which the literature tells us in people can  
11 vary from a low of about 1700 to a high of about 2900 which  
12 is a 20 percent overestimate to a 40 percent underestimate.

13 In the Cowan study the temperature change, he  
14 never forced people's temperature to change. He measured  
15 it at given points in time in average, normal, healthy  
16 people. And their overall temperature change was at most  
17 in the neighborhood of about in between, as I recall, one  
18 and two degrees Fahrenheit. So he was changing -- if the  
19 other data is right, he would have only been changing the  
20 reading by about four percent.

21 He then said when we look and compare breath  
22 alcohol to blood alcohol, the very exact thing that Guthrie  
23 says we're not supposed to do, you could not parse out the  
24 effect of body temperature on the effect of partition  
25 ratio. He said it, the language he used was it was

1 subsumed into the overall difference in partition ratio.  
2 That's a fancy way of saying if we're only changing one  
3 reading by four percent but our partition ratio can be off  
4 by more than plus or minus four percent, we're not  
5 necessarily going to be able to see it.

6           So the problem is he's using techniques that have  
7 larger amounts of error than the amount of error that is  
8 being introduced by the temperature. That's problem number  
9 one.

10           Problem number two, he didn't actually do what  
11 Fox did which was force people's temperature to change and  
12 look at the difference in the same person. He had a group  
13 of people. We don't know what their partition ratio is at  
14 any given point in time, so as a result we don't know  
15 whether this person is normally high because they're  
16 normally high, or this person is low because they're  
17 normally low. So we don't have the type of using the  
18 person as their own control like they did in Fox, where the  
19 person had this ability to absorb and distribute and  
20 eliminate alcohol and you use that same person, what their  
21 reading was at different temperatures. Cowan did not do  
22 that.

23           Q     Well, if you're doing a scientific experiment and  
24 you want to see if there's a variable that makes a  
25 difference or not, don't you have to isolate that variable?

1           A     That's the way you normally do it. You try and  
2 keep everything else the same and isolate it. He did not.  
3 He wanted to see whether or not temperature affected  
4 partition ratio.

5                     Realize a breath instrument gives us a breath  
6 value. A blood instrument gives us a blood value.  
7 Partition ratio is blood divided by breath. Anything that  
8 affects the blood, if we then choose to calculate the  
9 partition ratio, will affect the partition ratio. But  
10 temperature affects the amount of alcohol in your breath.  
11 Your breathing affects the amount of alcohol in your  
12 breath, regardless if you then take the additional step to  
13 use partition ratio to make the calculation. It changed  
14 what was in your breath.

15                   MR. NESCI:   Your Honor, at this time I'd move to  
16 admit defense Exhibits, defense Exhibit G which is the IACT  
17 newsletter.

18                   THE COURT:   Any objection, Mr. Mills?

19                   MR. MILLS:   I'm sorry. Which exhibit?

20                   MR. NESCI:   G.

21                   THE WITNESS:   G.

22                   MR. MILLS:   Which one was that?

23                   MR. NESCI:   The IACT newsletter.

24                   MR. MILLS:   As an exhibit. No, I have no  
25 objection.

1 THE COURT: All right. I'll admit it.

2 MR. NESCI: Can I have just a moment, Your  
3 Honor?

4 THE COURT: Uh-huh.

5 BY MR. NESCI:

6 Q Can we talk about temperature in, separately  
7 from, from, or the effect of temperature separately from  
8 partition ratio?

9 A You can talk about temperature solely as how does  
10 it affect a person's breath test. We get a breath value  
11 that in Arizona is defined as grams of alcohol per 210  
12 liters of blood. Using the partition ratio as taking that  
13 grams of alcohol per 210 liters and convert it to grams of  
14 alcohol per hundred milliliters of blood, it's using that  
15 2100 or some different number to convert it into a blood  
16 value. It's that that Guthrie says you can't do. But you  
17 can just look at the breath value itself. What does the  
18 breath value do? The number you get on the Intoxilyzer if  
19 we change your temperature, if we change your breathing.  
20 Yes, that's what the studies have actually looked at.

21 Q So that can be discussed separately from  
22 partition ratio?

23 A Right. Realize because it affects breath and the  
24 next calculation will be if we've got a blood, we can  
25 convert a partition. Because we've changed the breath, we

1 will change the partition. But you don't have to use the  
2 partition ratio to talk about a breath value. We're  
3 talking about how you get a reading. If your temperature  
4 is different, you get a different reading regardless --

5 Q So you can go from --

6 A -- of partition.

7 Q Excuse me. So we can go from A to B which is the  
8 temperature or the breathing patterns to the breath test  
9 result without going to C which is the conversion with  
10 partition ratio to blood?

11 A Correct.

12 MR. NESCI: I don't have any further questions.

13 THE COURT: So the reading on the Intoxilyzer is  
14 not a reading based on a partition ratio calculation?

15 THE WITNESS: If you want to make the mental  
16 leap, the breath test says I am grams of alcohol per 210  
17 liters of breath. If you make the mental leap and say I'm  
18 going to pretend you're 2100 to 1, that unit then becomes  
19 grams of alcohol per 100 milliliters of blood. You have  
20 now used the partition ratio to convert a breath alcohol  
21 content to a blood alcohol content. But the instrument  
22 registers in terms of breath.

23 THE COURT: Okay.

24 THE WITNESS: That's what grams per 210 liters  
25 is. Because nobody draws 210 liters of blood, it's 210

1 liters of breath.

2 THE COURT: Okay. I had one more question  
3 before Mr. Mills.

4 Did you say that partition ratios can vary  
5 between individuals from moment to moment basically?

6 THE WITNESS: Correct.

7 THE COURT: All right. So would it be possible  
8 for a defendant to ever introduce evidence of his  
9 individual partition ratio and it would be relevant to the  
10 reading on the machine?

11 THE WITNESS: I as a scientist would never, we  
12 never (inaudible) try and tell the Court whether or not a  
13 piece of information was relevant. The problem is if I am  
14 a defendant, unless the police officer draws blood in close  
15 proximity to the time where he measured my breath, I can  
16 measure my partition ratio the next day, but I can't prove  
17 it was the same value I had the day before.

18 THE COURT: Scientifically would it be relevant?

19 THE WITNESS: I don't believe it is. From the  
20 point of view that I can get a measurement, but I can't  
21 tell you that measurement was what it was the day before.  
22 And the literature tells us it varies from hour to hour,  
23 from minute to minute, from day to day.

24 THE COURT: Okay. Thank you.

25 MR. NESCI: I have one question based on yours.

1 THE COURT: Uh-huh.

2 BY MR. NESCI:

3 Q Mr. Flaxmayer.

4 A Yes.

5 Q You heard Mr. Sloneker talk about doing a breath  
6 sample, a blood sample in between and then a breath sample.

7 A Yes.

8 Q That would be scientifically relevant, correct?

9 A Yeah. Because you'd then have a value. You'd  
10 then have a breath bracket. We don't really think you're  
11 reading significantly changes in that five to ten minute  
12 period of time. We would then have your partition ratio at  
13 that moment. But the defendant isn't the one in charge to  
14 get that. That would have to be a choice made by the  
15 police. The only agency I've seen routinely doing that  
16 have been some of the agencies in Yavapai County.

17 THE COURT: Mr. Mills.

18 MR. MILLS: Thank you, Your Honor.

19

20 CROSS-EXAMINATION

21 BY MR. MILLS:

22 Q If, however, a defendant were released at the  
23 scene and went and got subsequent testing done to have  
24 blood drawn, that would be something that he could use in  
25 his defense, would it not?

1           A     He could use it. Whether it would be in his  
2 defense would, of course, depend upon the results he  
3 obtained and whether or not you all objected that it was  
4 not relevant because it was too far removed in time.

5           Q     Well, assume that he's also been in control of  
6 what he ate and all that I presume he'd be able to do a  
7 retrograde extrapolation with a witness such as yourself so  
8 he could get it back to the time of the driving to the time  
9 of the test of the (inaudible) with a breath test?

10          A     I can certainly do a retrograde based on  
11 sufficient facts if I was allowed to do so by the court,  
12 yes.

13          Q     As far as breathing and breathing patterns they  
14 don't change the accuracy of the Intoxilyzer 8000 actually  
15 sampling whatever breath is introduced into it, do they?

16          A     No. The instrument is still going to measure  
17 what it is given. The only problem is what it is given may  
18 not accurately represent what they consumed.

19          Q     As compared to blood?

20          A     Well, as compared to breath or as compared to  
21 blood. You can use it for either, but, again, if you use  
22 it as compared to blood, you then have to worry about that  
23 partition ratio conversion.

24          Q     But if you're just taking it as the statute is  
25 written and a volumetric measure of grams per 210 liters,

1 then that's an actual measure of the breath at the time  
2 it's measured?

3 A Right. It's just not representative of what he  
4 consumed which is what the statute asks for.

5 Q Right. Well, you're getting into amounts  
6 consumed. We're not into that. We're to the percentage of  
7 concentration in his body at the time it's measured.  
8 That's what law or violation is, is it not?

9 A Oh, it's a violation that his BAC is a certain  
10 value or his breath is a certain value based on the alcohol  
11 that he consumed before or during driving. That's the  
12 statute.

13 Q Right. And it obviously came from the alcohol  
14 that he drank.

15 A I agree.

16 Q It didn't come from outer space or some external  
17 source other than what he drank?

18 A That would be the normal way he would get it in  
19 his system, I agree.

20 Q So when we're actually talking about breath  
21 testing and breath samples, we don't need to get into  
22 partition ratio because the law is that if you are above  
23 the stated value per 210 liters ratio of grams alcohol,  
24 that in itself is a violation. You no longer need to  
25 convert to a blood reading like we used to back when you

1 taught 4011 and 5000 Intoxilyzer classes?

2 MR. NESCI: Objection. He's asking for a legal  
3 conclusion.

4 THE WITNESS: I was already to give one.

5 THE COURT: Overruled. I'll let him give one.

6 THE WITNESS: The way the statute is now written  
7 our esteem Court of Appeals has said we no longer have to  
8 do a conversion from breath to blood and they say that is  
9 inappropriate unless the person has enough facts to be able  
10 to do it or it then may be appropriate in part of the  
11 charge.

12 BY MR. MILLS:

13 Q In the studies done talking about, I think you  
14 mentioned Jones review, the Hayward/Fox study and breathing  
15 patterns influencing the breath tests and results thereof,  
16 did you not find out that a person to hold their breath for  
17 at least 30 seconds to really achieve a difference in the  
18 breath alcohol readings?

19 A He cited a study that they had to hold 30.  
20 There's at least one other study done where they only had  
21 to hold it 15. They got the same change. NHTSA has data  
22 that shows a change occurs in as little as one to two  
23 seconds, but we cannot tell you the magnitude of the  
24 change. Fifteen or thirty seconds, both of those studies,  
25 to my recollection, showed a change of approximately 15

1 percent.

2 Q Correct. And do you know what the other study  
3 was you mentioned other than the Jones study?

4 A Not as I sit here. I don't have a recollection  
5 of the name. I can look it up, but I don't recall it off  
6 the top of my head.

7 Q Okay. And in the same Jones study I believe he  
8 found that hypo, hyperventilation, breathing quickly, would  
9 decrease it by ten percent but you needed to do that for 20  
10 seconds or more; is that also correct?

11 A I believe he tried it for 20 seconds and then  
12 reported the result that was obtained. So part of it was  
13 experimentation he did. He had them hold it for 30. It  
14 went up by 15 percent. Although at least one of his people  
15 it went up by 22, but that's okay. I think he talked about  
16 15.

17 Q Right. And would you agree that if a person  
18 having done this then takes a deep breath as instructed  
19 appropriately by officers to take an Intoxilyzer 8000  
20 sample, takes a deep breath and then blows into the device  
21 and otherwise follows the instruction of the officer in the  
22 way you've already explained it, that that would take that  
23 out of the equation? That takes that effect off the table  
24 and is now breathing with a deep breath, blowing out  
25 according to the way he's supposed to blow, would no longer

1 have an effect then from either holding your breath or  
2 breathing quickly at that point?

3 A If an individual has been holding their breath or  
4 they have been hyperventilating and they stop that  
5 behavior, they exhale whatever breath now have, they inhale  
6 a new breath and they then immediately exhale that breath  
7 into the instrument, that breath should no longer be  
8 affected by either holding their breath or by the  
9 hyperventilation. It should have now all been washed away  
10 because the breath that was affected is now gone.

11 Q So it's, in effect, reset if you will to use that  
12 terminology?

13 A Yeah. You've gotten rid of the change that  
14 occurred from what you were doing.

15 Q And that's the way officers are taught to  
16 administer these tests, correct?

17 A Officers are told that they want the individual  
18 to take a deep breath and blow into the instrument. To  
19 that extent I would agree. When I taught people, we didn't  
20 tell them that if you held your breath, you would get a  
21 higher reading. We didn't want the officers to know that.  
22 We just told them to have the person take a deep breath,  
23 immediately blow and if they weren't agreeing with your way  
24 of doing it, you were in control of the mouthpiece. Take  
25 it away.

1 Q Correct. As far as the study, however, that  
2 Cowan's made, and you've talked about that a little bit,  
3 it's true, is it not, that he also found among various  
4 findings that the body temperature or the expelled breath  
5 temperature was not really strongly associated with the  
6 breath/blood ratio?

7 A Yeah. He was using oral or ear or forehead  
8 temperature. So he didn't do it the way the did it in Fox  
9 in terms of rectal, but in his he did not find a close  
10 correlation, between core body temperature and end  
11 expiratory breath temperature.

12 Q And among his findings he found that the person  
13 with the highest body temperature, I think 37.6, didn't  
14 have the highest breath temperature nor the lowest  
15 breath/blood ratio.

16 A Yeah. I believe that's correct. I think you're  
17 probably reading it so, hopefully, you're reading it  
18 correctly.

19 Q Yes. And the person with the highest breath  
20 temperature at 35.5 Celsius had neither the highest body  
21 temp nor the lowest breath/blood ratio.

22 A Yeah. That's my recollection as well.

23 Q And the person with the lowest body temp at 36  
24 degrees did not have, Celsius, did not have the lowest  
25 breath temperature, but did have the highest partition

1 ratio, 1 to 2765.

2 A I believe that's correct.

3 Q And the person with the lowest breath temperature  
4 at 33.3 degrees Celsius, which I think you referenced, has  
5 neither the lowest breath temperature nor the highest  
6 breath/blood ratio.

7 A Correct.

8 Q In the Jones study, A.W. Jones, this would be the  
9 one from 2006 in the Forensic Journal, Volume 39, Number  
10 3 --

11 A Do you have a title?

12 Q Yes, sir. I'm sorry. The Course of the Blood  
13 Alcohol Curve After Consumption of Large Amounts of Alcohol  
14 Under Realistic Conditions.

15 A Is that the one that he wrote with --

16 Q It's a reissue of Zinc (ph) article actually.

17 A Oh, okay. So it's not the one that he did where  
18 they went to Sweden and they ate herring and meatballs and  
19 potatoes.

20 Q It doesn't seem to give the diet.

21 A Okay. Cool. Just wanted to make sure.

22 Q That's fine. Apparently he's saying that he  
23 found it took an average of two minutes to reach a peak BAC  
24 after one stopped drinking.

25 A I do not recall Jones ever saying that, no. Now,

1 there was an article he talked about where people had  
2 been drinking beer for like 24 hours and he said that  
3 actually some of those individuals reached their peak  
4 before they stopped drinking, but that was because they had  
5 their alcohol consumption spread out over such a long  
6 period of time, the amount that they were drinking in the  
7 last increment didn't make a big difference in terms of  
8 their overall BAC.

9 Q And that would be true of people in social  
10 drinking as well, wouldn't it, if you were drinking your  
11 drinks in a one after the other fashion, not all at once,  
12 then the last drink consumed generally is not going to have  
13 as big affect as what went on before, I presume.

14 A If you have somebody that's drinking hour after  
15 hour after hour and they drink ten drinks, that last drink  
16 is only one tenth of their total alcohol. Where is if you  
17 have a person who has two or three for the road, then it's  
18 two or three out of the ten. So I agree in general.

19 Q Correct. Apparently there's a study by Gullberg,  
20 G-u-l-l-b-e-r-g, R.G., variations in blood alcohol  
21 concentration following the last drink, Journal of Police  
22 Science and Administration, Volume 10, Number 1. This is  
23 back in 1982 though. Found that apparently 81.3 percent of  
24 volunteers reached their peak BAC in 30 minutes or less.  
25 Is that in accordance with other studies you're aware of?

1           A     Gullberg, to my recollection, did two and one  
2 of the ones was talked about by Mr. Sloneker. He said that  
3 it was a PBT versus breath comparison where people were  
4 stopped. They measured their PBT. They took them to the  
5 station. They measured their breath alcohol to see who was  
6 going up and who was going down. It was published twice.  
7 Once had a significant number of people going up and down.  
8 The second one cleaned up some of the data and got rid of  
9 some of the outliers, but a number of saying about 81  
10 percent of them had reached their peak, I'm not really, I'm  
11 not really uncomfortable with that that can occur. Realize  
12 only one caveat, it depends on how close your drinking is  
13 to where the people are stopped.

14           Q     Sure.

15           A     If you set up a roadblock at Casa Grande and  
16 you're stopping people from Tucson, most of them are going  
17 to have reached their peak. But if you stop somebody on  
18 Fifth Avenue and they were drinking on Fourth Avenue, most  
19 of them are still going up.

20           Q     Gotcha. And one other (inaudible) to the Cowan  
21 study you were just talking about with me a moment ago.  
22 Apparently he was finding that people who had normal body  
23 temperatures, not, you know, the hot tub experience, that  
24 if they were between 96.8 to 99.8, that that temperature  
25 within that didn't seem to affect their breath alcohol

1 readings or the partition ratio.

2 A When they then tried to look at their partition  
3 ratio, he could not parse out a difference --

4 Q Right.

5 A -- and his final sentence was it was subsumed  
6 into the larger potential error of the partition ratio.

7 Q Right. Because it had more factors than the  
8 partition ratio than just body temperature?

9 A Right. And it's also a bigger percentage of  
10 potential error. So it's hard to see a small error that's  
11 encapsulated in a larger error.

12 Q Right. Because partition ratio involves so many  
13 more factors than just the breath temperature or the body  
14 temperature?

15 A Correct.

16 Q You mentioned -- I think actually you probably  
17 spoke on it later. In the beginning of your testimony you  
18 mentioned that nobody, you know, is capable of delivering  
19 210 liters of breath, and I think everyone would agree with  
20 that, but as far as the Arizona regulations go it's simply  
21 a ratio, is it not, of grams to 210 liters of breath? So  
22 to be valid or accurate the device doesn't have to accept  
23 in the sample chamber 210 liters to produce a valid result?

24 A Right. It measures the amount in whatever size  
25 the chamber is and it then multiplies to give us an answer

1 in terms of grams per 210 liters. We can then use the  
2 partition ratio and multiply which gives us grams per 100  
3 milliliters.

4 Q Or we can stick with breath and follow the  
5 Arizona law on that side of the equation I presume?

6 A It actually uses an or so I think you all get to  
7 bicker about that.

8 Q Thank you.

9 As far as alveolar air, as mentioned you were  
10 involved at some point in writing some of the regulations  
11 for breath testing devices here in Arizona, correct?

12 A I was one of some 26 people who had input. The  
13 Department of Health Services then adopted them so we were  
14 actually told we didn't get to coin we wrote them even  
15 though our sentences sometimes were adopted verbatim.

16 Q Well, authority and credit aside, it would appear  
17 at the time at least that you used the term called alveolar  
18 air. Was that well-understood by the committee that  
19 adopted that regulation as to what they meant?

20 A We actually didn't use -- sorry. We used  
21 essentially alveolar in nature because we knew you couldn't  
22 get alveolar air. The technical people knew. I think the  
23 legal people were clueless.

24 Q Wasn't there, in fact, an editing that occurred  
25 of drafts that eliminated that?

1           A     An edit occurred by the people on the --  
2     there's a committee before a bill goes to the Legislature  
3     or before rules are adopted and there's a lawyer on the  
4     committee. He didn't like the word essential so he whacked  
5     it and didn't tell anybody he whacked it.

6           Q     That's how it got adopted.

7           A     Exactly. Some time years after -- we've been  
8     using essential for 20 years and they suddenly decided that  
9     essential was a weasel word and it shouldn't be there.

10          Q     So, but for that, the committee, however, and the  
11     people in the community, the forensic experts, understand  
12     that it would be essential and that was what was understood  
13     at the time that it was proposed, even though somebody had  
14     messed with the language, but what was officially adopted  
15     as the law in Arizona?

16          A     We understood that it had to be essentially  
17     alveolar in nature and that was what was originally  
18     adopted. Someone later, when they modified it, changed it  
19     and what was subsequently adopted no longer uses the word  
20     essentially.

21          Q     You would agree with me, would you not, that an  
22     Intoxilyzer 8000, to the extent humanly possible, however,  
23     gets the breath that is nearest alveolar air and is in  
24     compliance with the intent of that regulation as originally  
25     proposed?

1           A     If an individual blows to the extent that they  
2     can blow, we're going to get a sample result that is  
3     essentially alveolar in nature. Average, normal, healthy  
4     person that's what I would expect.

5           Q     Okay. Just to dovetail onto that and, if for  
6     instance, a person for whatever reason, consciously or  
7     unconsciously, doesn't blow as long and as deep as he's  
8     supposed to be instructed to do, does that end up giving  
9     the defendant a higher or lower number than it would be if  
10    he fully complied with the instructions?

11          A     All other things being equal, if the individual  
12    does not, to the extent that your body allows it, empty  
13    your lungs, you will then get a slightly lower reading on  
14    the sample that has slightly less air.

15          Q     But, obviously, it would be self-beneficial then?

16                MR. NESCI:    Objection. Your Honor, that's  
17    calling for a legal conclusion.

18                MR. MILLS:    (Inaudible) scientific number  
19    reading. Is it higher or lower. That's all I'm getting  
20    to, Your Honor. I won't (inaudible).

21                MR. NESCI:    Science doesn't care whether it's  
22    higher or lower, beneficial or not beneficial.

23                THE COURT:    I'll sustain the objection.

24    BY MR. MILLS:

25          Q     (Inaudible) results in a lower number, right?

1           A     If the person does not exhale as much, all  
2 other things being equal, the resulting number would be  
3 slightly lower. I agree.

4           Q     We've spent some time on partition ratio and what  
5 affects, mainly talking about temperature. Are there other  
6 things that affect the partition ratio in your experience?

7           A     Anything that affects either the blood reading or  
8 the breath reading will affect the partition ratio because  
9 it is a ratio between the two. Things that can affect  
10 either breath or blood -- I mean, Dubowski says hematocrit  
11 can change it up by about plus or minus five percent  
12 because it changes the amount of water which means you  
13 drink the same amount of alcohol. The more water there is  
14 in the blood, the higher the blood alcohol that comes.  
15 That changes your partition ratio.

16                     So anything that affects either breath or blood  
17 will affect the ratio between the two.

18           Q     As far as that, have subsequent studies found  
19 that you really can't measure an affect on hematocrit on  
20 blood/breath ratios?

21           A     You run into this entertaining thing in science.  
22 Dubowski publishes some thing. Jones does another  
23 experiment and says he's wrong. Unfortunately you then  
24 have two articles that disagree. Unlike in law where  
25 there's an arbitrator who says I like this one better, in

1 science you're stuck with both of them.

2 Q So they're both accurate?

3 A They both say what they say. As to what the  
4 ultimate truth is we may not know until more people do it.  
5 But realize this argument's been going on now for 30 years.  
6 Nobody's coming out to do the research. So because it's  
7 plus or minus five percent, I would say the majority of  
8 scientists truly couldn't care less.

9 Q So it's a non-factor in partition ratios as far  
10 as you're concerned --

11 A Yeah. It's one that attorneys will argue about  
12 because they want the additional five percent one way or  
13 the other, but from a science perspective it merely adds to  
14 the uncertainty, but is certainly the smallest of the  
15 errors we look at.

16 MR. MILLS: That's all I have at this time, Your  
17 Honor.

18 THE COURT: Mr. Nesci.

19 MR. NESCI: Thanks.

20

21

REDIRECT EXAMINATION

22 BY MR. NESCI:

23 Q Mr. Flaxmayer, you were talking about doing a  
24 retrograde, say, for example, from a person who has an  
25 independent blood test and going backwards in time to

1 compare that with breath. Wouldn't you need to know that  
2 person's partition ratio in order to do that?

3 A Well, the partition ratio would then be a  
4 potential variable that may explain the discrepancy between  
5 the two. So to that extent yes, it may affect the accuracy  
6 and reliability of the calculation or the number that you  
7 subsequently use and believe.

8 Q Generally, if you increase end expired breath  
9 temperature, you release more alcohol from mucous and  
10 increase the result, the reported result, correct?

11 A If that comes from an increase in body  
12 temperature, yes.

13 Q Okay. Now, does the manner -- or let me ask you.  
14 If a person has a temperature of 100 degrees Fahrenheit,  
15 would that be considered normal?

16 A It's within the normal range. If you're ever  
17 bored enough to look it up in a dictionary, you will find  
18 literature that says you can be as cool as 96.8, you can be  
19 as high as 100.4. Above 100.4 is a fever, but anywhere  
20 within that range can be normal for you as an individual.

21 Q And does the manner in which the regulations are  
22 written, or the holdings of the appellate courts, change  
23 the manner in which the Intoxilyzer measures alcohol?

24 A No. It may change what people think it means,  
25 but the instrument does the same thing and it's based on

1 the same science regardless of what you lawyers think.

2 Q The Legislature can legislate lots of different  
3 things, right?

4 A They've done so that's why the woman got to carry  
5 the pink gun into the legislature.

6 Q Can they legislate human physiology and make it  
7 stick?

8 A I think they can try and legislate it, but they  
9 have proven that they can't actually take the underlying  
10 scientific laws.

11 Q Okay. Now, if we have blood, a mixture of blood  
12 and alcohol in a jar and we cap it and we heat it to  
13 whatever temperature we want to heat it to, we can discern  
14 a partition ratio from the headspace above to the liquid  
15 below, correct?

16 A Correct.

17 Q And that's a direct partition ratio from blood to  
18 the headspace air --

19 A Right.

20 Q -- headspace air, headspace gas, correct?

21 A For that particular vial at that particular  
22 temperature.

23 Q Okay. When we talk about blood in a body, in the  
24 veins and arteries to the breath that comes out through the  
25 lungs, do we take other things into account? Like mucous

1 linings and that sort of thing?

2 A Yeah. It's not the same simple (inaudible) two  
3 phase liquid gas system that you have in a jar and you have  
4 in Henry's Law. Your body is much more complicated.

5 Q Now, the breath -- now, the regulations say that  
6 breath specimens shall be alveolar in composition, correct?

7 A Correct.

8 Q From a layman's view or a scientist's,  
9 scientist's view, is there anything ambiguous about that?

10 A No. A lawyer wrote it and they adopted it as the  
11 law even though it is physiologically pretty much  
12 impossible.

13 Q All right. If you ask me for a glass of water,  
14 you said, I want a glass of water that's water in  
15 composition, and I pour it for you and I hand it to you,  
16 you'd be okay with that, right?

17 A Yes.

18 Q If I walked out of the room and came back with  
19 the same glass of water and said it's essentially water in  
20 composition, would you be willing to drink it?

21 A If you handed it to me, probably not.

22 Q Okay.

23 MR. NESCI: Can I have one moment?

24 THE COURT: Uh-huh.

25 MR. NESCI: I don't have any further questions,

1 or any further questions, Your Honor.

2 THE COURT: Mr. Flaxmayer, your testimony about  
3 the breathing patterns and the temperatures affecting the  
4 reading on a breath test.

5 THE WITNESS: Yes.

6 THE COURT: That could be, that independent of  
7 the partition ratio calculation.

8 THE WITNESS: Right. You never have to go use  
9 the partition ratio for it to have affected the amount of  
10 alcohol that was in your exhaled human breath.

11 THE COURT: Because of the mucous membranes and  
12 the other things that Mr. Nesci was talking about?

13 THE WITNESS: And the fact that it's still  
14 coming out into your breath which is what we're measuring.

15 THE COURT: Okay. But I know that I'm probably  
16 the stupidest person in the room about all of this, but I'm  
17 going to try and --

18 THE WITNESS: I wouldn't know. I have a list.  
19 We could talk about this some time.

20 THE COURT: Mr. Sloneker said that holding your  
21 breath heats up your air, it changes what's in the sample  
22 chamber which, my understanding which was Henry's Law,  
23 which was the whole conversion thing. So explain to me  
24 what --

25 THE WITNESS: Henry's Law says you can take a

1 sealed system with a liquid with a volatile, blood with  
2 alcohol, you can measure the amount of alcohol in the gas  
3 and calculate what's in the blood. What we are doing with  
4 the breath test is measuring the amount of alcohol that is  
5 in the gas. So that is what we are measuring. And if your  
6 temperature is higher, we get more in the gas. If your  
7 temperature is lower, we get less in the gas. It's only  
8 when we then try and calculate what was in the blood from  
9 what was in the breath that we now are using that partition  
10 ratio to make the calculation.

11 So we're using the 8000 to measure what's in the  
12 gas. If you want to see what's in the blood, you have to  
13 then use Henry's Law and that partition ratio.

14 THE COURT: Okay. Does anybody have any  
15 questions based on that what I was asking Mr. Flaxmayer?

16 MR. NESCI: Yes.

17 THE COURT: We'll start with Mr. Mills.

18 MR. MILLS: Was he finished with his --

19 THE COURT: Yes.

20 THE WITNESS: Yes, he was. She then asked the  
21 question.

22 THE COURT: Now, we're starting all over again.

23 . . . .

24 . . . .

25 . . . .

## RE-CROSS-EXAMINATION

1

2 BY MR. MILLS:

3 Q If I brought you a glass of water, would you  
4 drink it?

5 A Wow. Yeah, I probably would.

6 Q Do you remember how good of a student he is for  
7 the 4011s and 5000s way back (inaudible) that course?

8 A Actually, no, but I remember you and I going out  
9 to dinner once and you bought a drink and I drank it.

10 Q What were the affects of it?

11 MR. NESCI: Chet will buy it, will drink any  
12 drink anybody buys for him.

13 BY MR. MILLS:

14 Q We were talking about the mucous --

15 A Yes.

16 Q -- and I believe in your other testimony you did  
17 explain both sides of that.

18 There is an exchange both when you inhale and  
19 when you exhale --

20 A Correct.

21 Q -- so you were saying, well, you know, at some  
22 point the exhaled mucous contribution might add to or  
23 subtract from it. As the person breathes in and out, it's  
24 actually going to pretty much cancel out, isn't it?

25 A That would be the theory. There are some people

1 who argue no. That's why some people back in the 50s  
2 wanted everybody to do re-breathed air because it totally  
3 canceled it out as a question. But I agree with you. I  
4 would anticipate it pretty much cancels it out. If you're  
5 inhaling air, you're then exhaling air, you're pulling  
6 stuff out, you're pushing stuff back in.

7 Q So, I mean, the average individual, you know,  
8 most the studies, I think you had indicated you would agree  
9 that at least past that point in time that it's going to be  
10 a null set when you get done with it. It's pretty much  
11 going to be a negligible if any effect on what the  
12 instrument measures?

13 A I personally do not think the mucous lining has a  
14 huge variability to it. Although I admit there's published  
15 literature that says that there are people who believe it  
16 does.

17 Q And others that say (inaudible)?

18 A Yeah. I agree.

19 Q So, again, published on both sides of that issue  
20 out there?

21 A Correct.

22 Q Not a consensus in the publications?

23 A I agree. Not a consensus in the relevant  
24 scientific community.

25 Q You wouldn't expect it to be beyond the five

1 percent accuracy of an Intoxilyzer 8000, would you?

2 A Well, I have three thoughts to that. Number one,  
3 if we're going to say an Intoxilyzer is good to five  
4 percent, the next time you get an oh-nine-four or a one-  
5 oh-six reading, you should pull it out of service. But  
6 since your crime lab has had both and didn't do that -- I  
7 don't know of anybody with the exception of Mr. Sloneker  
8 who routinely says they're good to five percent.

9 Second thought, I can't tell you whether or not  
10 the mucous affects it to more than five percent or not.  
11 Could it? Theoretically yes. Does it in a day to day  
12 situation? I would doubt it, but I have no real data with  
13 which to determine that.

14 Q Gotcha. Okay.

15 MR. MILLS: That's all I have, Your Honor.

16 THE COURT: Mr. Nesci, anything else?

17

18

FURTHER REDIRECT

19 BY MR. NESCI:

20 Q Mr. Flaxmayer, I think I've got a couple  
21 questions I could clear this whole thing up.

22 A Okay.

23 THE COURT: Why didn't you ask those first, Mr.  
24 Nesci?

25 MR. NESCI: I'm getting paid by the hour. I'm

1 doing this pro bono.

2 BY MR. NESCI:

3 Q Mr. Flaxmayer.

4 A Yes.

5 Q If I have a breath alcohol concentration of .070,  
6 police officer asks me or you ask me to blow into an  
7 Intoxilyzer 8000. You instruct me properly. I blow into  
8 the machine properly. We don't even factor in the plus or  
9 minus ten percent machine error. Just me blowing into the  
10 machine. Okay. And I blow a .070. Can I then, for  
11 breathing patterns -- and say I could read my body  
12 temperature, could I then have that .070 breath alcohol  
13 concentration, can I blow above a .080 breath alcohol  
14 concentration?

15 A Yes. But let's make it a finer point. If you're  
16 true value is .079, you could choose to breathe in a manner  
17 where all of your breath readings were below .080. You  
18 could choose to breath in a manner where all of your  
19 readings were above .080.

20 Q So we're talking about breath alcohol  
21 concentration compared to breath alcohol concentration?

22 A Correct.

23 Q And we don't have to use partition ratio to make  
24 the leap to blood alcohol concentration?

25 A Correct. Because you have to have a breath

1 reading and a blood reading to be able to get a partition  
2 ratio or you can try and use a partition ratio to make the  
3 calculation to blood. But I can take a breath reading that  
4 I have, I can hold my breath and I can make the next breath  
5 reading higher. I can hyperventilate and I can make the  
6 next breath reading lower.

7 Q So if you and I were in trial and I say, Okay,  
8 we've got somebody who's got a breath alcohol reading of,  
9 say, .081, could the machine -- or a breath alcohol reading  
10 -- a .081, okay. Could that person's true breath alcohol  
11 concentration be under .080?

12 A Yes.

13 Q And I'd just be comparing breath to breath,  
14 right?

15 A Correct.

16 Q And never touching partition ratio, right?

17 A Correct.

18 MR. NESCI: I don't have any further questions.

19 MR. MILLS: Just one.

20

21

RECROSS-EXAMINATION

22 BY MR. MILLS:

23 Q And both of those scenarios would be in violation  
24 of how operators are taught to have subjects breathe, as  
25 you mentioned just about five minutes ago, that you need to

1 take a deep breath and blow out. I think you agree with  
2 me it would cancel out any prior breathing pattern, either  
3 holding your breath or hyper ventilating?

4 A I agree that the officers are generally taught to  
5 have the person take a deep breath and blow. If the  
6 individual takes a deep breath and blows and there is no  
7 delay, then they would not then have had the individual  
8 hold their breath, nor would the individual have then  
9 hyperventilated.

10 But, again, go back to my earlier testimony. My  
11 experience most officers have not been taught don't have  
12 the person hold their breath or don't have them  
13 hyperventilate. They're taught to have them take a deep  
14 breath and blow into the instrument.

15 Q All right. But if they do take a deep breath and  
16 blow, doesn't that cancel out what went before?

17 A Yeah. If the individual takes a deep breath and  
18 immediately blows it into the instrument, if they  
19 hyperventilated or held before, it should no longer have an  
20 affect.

21 MR. MILLS: Nothing further, Your Honor.

22 THE COURT: Thank you, Mr. Flaxmayer.

23 THE WITNESS: Thank you. May I be excused?

24 THE COURT: Yes.

25 THE WITNESS: Excellent. Thank you.

1 MR. MILLS: I think we're done, Your Honor.

2 THE COURT: All right. It's your motion. Do  
3 you want to argue? Or have we exhausted everything?

4 MR. MILLS: (Inaudible)

5 MR. NESCI: I'm ready.

6 MR. MILLS: Frankly, I'd rather do it in writing  
7 if the Court doesn't . . .

8 THE COURT: Do you want to waive your oral  
9 argument?

10 MR. MILLS: I'd like to make a written closing  
11 argument, yes.

12 THE COURT: Okay. Mr. Nesci. I don't suppose  
13 we'd be so lucky with you? No, please go ahead.

14 MR. NESCI: Just because Judge Bernini was that  
15 lucky on the source code stuff. I don't know, it doesn't  
16 mean . . .

17 Hang on one second. Let me talk to the attorneys  
18 who are directly involved.

19 THE COURT: Okay.

20 Mr. Barnard, since I have you here, are you ready  
21 to go to trial on the 25th on Royal? Because one of these  
22 cases is set that day and it's not --

23 MR. BARNARD: (Inaudible) to be here. She's out  
24 of state, but she's coming.

25 THE COURT: Okay. All right. Then I won't have

1 to rule quite as quickly.

2 MR. NESCI: Yeah. I'd just like a couple of  
3 minutes.

4 THE COURT: Okay.

5 MR. NESCI: Yeah. Judge, you know, first off I  
6 think we have to step back from the testimony and look at  
7 what they're actually asking to be done here in the first  
8 place. They're saying that, they're trying to limit the  
9 defense. They're trying to prevent us from putting forth a  
10 defense and they're giving for that is relevance. So we've  
11 got to look at the rules for relevance.

12 The first thing we look at is Rule 401,  
13 Definition of "Relevant Evidence". Relevant evidence means  
14 any evidence, means evidence having any tendency to make  
15 the existence of any fact that is a consequence to the  
16 determination of the action more probable or less probable  
17 than it would be without the evidence.

18 Well, clearly this is relevant evidence because  
19 we're talking about things that affect the actual breath  
20 test result. So it passes that 401 hurdle.

21 The next thing we look is 402, Relevant Evidence  
22 Generally Admissible: Irrelevant Evidence Inadmissible.  
23 Well, it's generally relevant, so it's admissible.

24 Then we have to go on to Rule 403, because not  
25 all relevant evidence admissible and 403 has, Although

1 relevant, evidence may be excluded if its probative value  
2 is substantially outweighed by the danger of unfair  
3 prejudice, confusion of the issues, or misleading the jury  
4 or by considerations of undue delay, waste of time, or  
5 needless presentation of cumulative evidence.

6           Your Honor, the defense does not have to prove  
7 that the breath test number is wrong. It's the government  
8 that has to prove that the breath test number is right by  
9 proof beyond and to the exclusion of every reasonable  
10 doubt.

11           Now, there are factors that affect every single  
12 breath test that the government cannot account for, yet  
13 they do affect every breath test because if you don't have  
14 a temperature, I mean, any temperature at all, not a fever  
15 temperature, you're not going to have a result. You've got  
16 to have something because if you don't have (inaudible)  
17 into the machine, you have no breathing pattern whatsoever.  
18 Obviously it can affect the result. You don't have it.  
19 You have to have a breathing pattern.

20           Now, granted a lot of the defense is based upon  
21 things that the defense cannot prove happened. We can't  
22 prove anything's happened. But when we can show that there  
23 is the reasonable possibility that these things happened.  
24 Those things become reasonable doubt and that is squarely  
25 backed by the U.S. Constitution and the confrontation

1 clause. We have the ability to confront the evidence  
2 that is placed against our clients.

3 And, frankly, I think it's distasteful for the  
4 prosecution to come in here and say, look, these factors do  
5 exist. Some scientists say they exist and they give us big  
6 changes. Sometimes they say they exist and they give us  
7 little changes that don't matter. Frankly, I think it's  
8 distasteful for the government to come in here and say,  
9 well, you can't use any of the science that's out there in  
10 order to show reasonable doubt to a jury. That's not the  
11 government's obligation. The government's obligation is to  
12 put forth evidence and try to field the questions that  
13 raise reasonable doubt.

14 So initially when we look at this, it's a very  
15 simple thing. It's 401, 402, 403.

16 Now, when we look at where did that alcohol come  
17 from as far as the testimony is concerned. It has to come  
18 from alcohol consumed prior to or while driving. Okay.  
19 Now, when we look at that and we actually take that apart,  
20 we're talking about an alcohol concentration. We have  
21 testimony to the fact that some of the alcohol that ends up  
22 in a breath test result may be from the mucous linings that  
23 are in the esophagus, extra breath alcohol if you will,  
24 EBA. These are things that actually contribute to the  
25 result and are certainly not part of partition ratio.

1 These are things that are outside of that.

2 Now, you can have a partition ratio for anything.  
3 I mean, if you -- there's always a ratio between the amount  
4 of alcohol in somebody's breath and somebody's blood, but  
5 how you get to that number makes a big difference and  
6 that's what we're talking about here. Because temperature  
7 can be independent of that. Breathing patterns can be  
8 independent of that. Hematocrit can be independent of  
9 that. And these are things that we get to raise  
10 constitutionally as the defense because they're relevant  
11 and instill reasonable doubt in a jury.

12 Now, I understand that the government doesn't  
13 like it when the defense raises reasonable doubt arguments  
14 especially ones that are perfectly reasonable. But that's  
15 the situation that we have here.

16 Now, if we take a look at the studies. I mean,  
17 breath holding for just one to two seconds, according to  
18 the National Highway Traffic Safety Administration, can  
19 increase the BAC. We have Mr. Sloneker saying hematocrit  
20 is not related to the partition ratio. Well, okay, it's  
21 not related to partition ratio, therefore, Guthrie doesn't  
22 come into play with that.

23 When we talk about the breathing patterns, we can  
24 have that situation where it flushes more out.

25 And lastly, I think we have a new jury

1 instruction. Breath specimens tested shall be alveolar  
2 in composition. That is what the regulation says. And  
3 there's no wiggle room in that at all. They took out the  
4 word essentially. If it was essentially, well, maybe  
5 they'd have an argument. But if breath tests, breath  
6 specimens tested shall be alveolar in composition, then  
7 it's the government's burden in each and every case to  
8 prove that the breath specimen tested is alveolar in  
9 composition. And if they can't do that, then they  
10 shouldn't be allowed to admit the breath test result  
11 because that's what the statute says. That's clear and  
12 there's nothing, there's nothing in it whatsoever that,  
13 that is ambiguous in any manner.

14 THE COURT: What about Guthrie, Mr. Nesci, and  
15 some of the language that seems to imply that the defendant  
16 has to introduce his own breath partition ratio for it to  
17 be relevant on the (A)(1) charge?

18 MR. NESCI: Well --

19 THE COURT: Which would, I think, kind of go to  
20 the whole, the rest of the factors.

21 MR. NESCI: Sure. I'm not asking you to  
22 overrule Guthrie, although I'd love it if you did it. But  
23 what we're talking about is Guthrie deals with partition  
24 ratio, breath to blood. You can't do that. We're not  
25 talking about that. We're talking about number of drinks

1 consumed. We're talking about breath to breath. That's  
2 what we're talking about.

3 My breath alcohol concentration is a .070, but I  
4 could blow into that machine and my breath alcohol  
5 concentration will be estimated as a .085. Breath to  
6 breath. That is not Guthrie. That's something we can do  
7 without touching partition ratio and we're not touching  
8 partition ratio. Breath to breath. If somebody wants to  
9 make that leap in the future and say, well, okay, let me go  
10 breath to breath and then we talk about that final step, A  
11 to B to C, breath to blood. Well, you know, that may or  
12 may not be in violation of Guthrie. That's something that  
13 the Court will have to decide based on the, based on the  
14 facts that are in front of it.

15 But that's not what we're doing. We're saying  
16 this is what the person's breath alcohol concentration  
17 should be. This is what the machine estimated it to be.  
18 There's a difference between the two and the difference is  
19 not partition ratio. The difference is temperature. The  
20 difference is breathing patterns. The difference is  
21 whatever it happens to be. That's what we're talking about  
22 here. Breath. Breath alcohol concentration to estimate  
23 breath alcohol concentration by a machine. Not the breath  
24 to blood.

25 So realistically Guthrie doesn't come into play

1 because that would be breath to blood, but that's not  
2 what we're talking about. We're talking about the number  
3 of drinks consumed, giving us an estimated breath alcohol  
4 concentration and a machine estimating a breath alcohol  
5 concentration.

6 I still don't see how, how these factors, how the  
7 Court could stop us from saying you can't use these factors  
8 because -- if Mr. Flaxmayer -- if a police officer comes in  
9 and says this person breathed perfectly normally, exactly  
10 as I told this person to breathe into the machine and Mr.  
11 Flaxmayer comes in and says, well, you know what, maybe the  
12 officer did tell them, but sometimes the person can subtly  
13 breathe differently and that can make a difference. Well,  
14 that's up for the trier of fact to sit there and say, well,  
15 hmm, the officer said he saw it that way, but Mr.  
16 Flaxmayer, an expert in the field, says, you know you can't  
17 always tell. That's a question of fact and that's properly  
18 within the province of the jury.

19 For example, temperature. If you'll notice in  
20 the article that we submitted as a, the IACT article -- I'm  
21 sorry. I think it was G. It's over here. Let me check.  
22 Yes, it's right here. G which was admitted. In that  
23 article they talk about temperature and they talk about the  
24 machine, the Draeger Alka test, 7110, MK3, Mark 3. That  
25 one, as you can read in the article, collects end expired

1 breath temperature and it corrects for it. If your  
2 temperature is lower or higher than what the machine  
3 expects, 34 degrees centigrade, it lowers your alcohol  
4 concentration, the estimated result, down to the reference  
5 temperature. If it's below, it doesn't raise it. And  
6 that's based on simply breath to breath. It has nothing  
7 really to do with breath to blood. It's breath, estimated  
8 breath alcohol concentration to estimated breath alcohol  
9 concentration by the machine. That's all it is. And  
10 that's all we're asking.

11 So Guthrie doesn't, Guthrie doesn't shift the  
12 burden to the defense to show what his temperature actually  
13 is. Guthrie doesn't shift the burden to the defense. And  
14 we're not using, we're not using partition ratio so Guthrie  
15 doesn't come into play.

16 THE COURT: Well, the State wants to preclude  
17 you from using partition ratio on (A)(1), which Guthrie, I  
18 think, goes back and forth on whether a defendant has to  
19 introduce his own partition ratio or, when you look at the  
20 California cases and the, I don't remember which other  
21 state it was, the Vermont case it's based on, seems to say  
22 the general evidence of partition ratio.

23 MR. NESCI: Sure.

24 THE COURT: I think that's part of the State's  
25 motion, too, is whether I can allow general partition ratio

1 evidence on the (A) (1) charge.

2 MR. NESCI: I think you can and I think there  
3 are a couple of reasons for it. One, the government is in  
4 total control of when that person gets an independent test  
5 of breath or blood if a person does. As Mr. Sloneker says,  
6 he really likes to do it between the first sample and the  
7 second sample of breath because then he gets it right then  
8 and there. And I agree with him. That's when you, that's  
9 when you get it done.

10 Mr. Flaxmayer says, well, you can get it later,  
11 but a person's partition ratio changes over time and then  
12 it's anybody's guess.

13 So when the government's in sole control over the  
14 methods by which the accused can get a sample of blood, I  
15 think you have to say, you know, Guthrie, to be reasonable  
16 and to interpret it properly, says you can use general  
17 partition ratio within the human, within the human scale.  
18 We're not asking to use anything that's outside of the  
19 human, the human scale.

20 Mr. Flaxmayer said you can't prove you're  
21 individual partition ratio at any point in time unless you  
22 actually go ahead and do that. And he's right. You can't.

23 So that's the main reason why one should be able  
24 to do that under Guthrie.

25 THE COURT: Okay. All right. Mr. Mills is

1 going to respond in writing. Is that going to make you  
2 want to respond back?

3 MR. NESCI: I don't know. Maybe. I'll have to  
4 see what he writes first.

5 THE COURT: All right. I'm going to take these  
6 under advisement.

7 Mr. Hughes, I don't think you're going to make it  
8 to a jury next week. I've got three older cases at least  
9 on my calendar, but I'm just going to leave it as a jury  
10 review, but I'm not going to use the 22nd as my deadline to  
11 make a decision. We'll figure out your specific case on  
12 the 22nd.

13 MR. HUGHES: And there's also the housekeeping  
14 thing. When I asked for funds, I asked for Mr. Stoltman.

15 THE COURT: Do I need to change the minute  
16 entry?

17 MR. HUGHES: Yeah.

18 THE COURT: Okay.

19 MR. HUGHES: Just to make sure Mr. (inaudible)  
20 is paid.

21 THE COURT: Okay.

22 MR. MILLS: I'm going to be gone for part of  
23 this coming weekend. Would the Court mind if I had until  
24 next Friday to turn in my closing argument?

25 THE COURT: All right. You all have a problem

1 with that, Mr. Hughes? I really don't think yours is  
2 going to go.

3 MR. HUGHES: I don't think so.

4 THE COURT: Will you give Mr. Mills till next  
5 week to turn in his closing argument?

6 MR. HUGHES: Sure.

7 THE COURT: All right. Let's do that then.

8 What was the amount, Mr. Hughes? Do you remember  
9 off the top of your head?

10 MR. HUGHES: Five hundred dollars. We each got  
11 five.

12 MR. NIEMIEC: Yeah. We each got 500 on the  
13 motion --

14 THE COURT: Okay. I was thinking about  
15 something else. All right. So you want me to write 500 on  
16 each file?

17 MR. NIEMIEC: Well, you've already written 500  
18 on mine and I had already retained Chet.

19 THE COURT: Okay.

20 MR. HUGHES: (Inaudible)

21 THE COURT: Okay. Okay.

22 MR. NIEMIEC: And I would ask for leave to  
23 possibly supplement that based on the waiting time if need  
24 be --

25 THE COURT: Supplement what?

1 MR. NIEMIEC: The motion for 500 --

2 THE COURT: The money?

3 MR. NIEMIEC: -- based on -- it may be a few  
4 more dollars based on the fact that --

5 THE COURT: Okay.

6 MR. NIEMIEC: -- he had to wait.

7 THE COURT: And are you guys going to request the  
8 transcript, Mr. Nesci, or is that, or Mr. St. Louis --

9 MR. NIEMIEC: Yeah, we would want it.

10 THE COURT: Are you guys going to request the  
11 transcript from Judge Berning's --

12 MR. NESCI: The Public Defender's Office is  
13 going to request a transcript.

14 MR. MILLS: We need -- of course, I don't know  
15 what -- if they're going to take it up it will be the  
16 obligation of --

17 THE COURT: For us, I don't think it matters  
18 because somebody's going to decide to take it up and then  
19 we'll have it, but these guys --

20 MR. NIEMIEC: We're going to need one anyway  
21 because they're passing it around the court and the idea  
22 was that we would (inaudible) make a record for --

23 THE COURT: I don't know who agreed to that.  
24 All I've ever heard -- I mean, I told -- I e-mailed all the  
25 other judges and said we're doing this. If you want to use

1 it and nobody answered me but Judge Berning on Ms.  
2 Bynam's case. So I don't know if anyone else has agreed to  
3 it. So I'll let you all deal with transcript issues  
4 basically.

5 MR. ST. LOUIS: Yes, we want the CDs.

6 THE COURT: I'll let you request them. I mean,  
7 as far as I know that's all I know. The State's agreed to  
8 this one case in front of Judge Berning to agree to it.

9 All right. Maria, will you update them and then  
10 you give them all back to me.

11 THE BAILIFF: Question (inaudible).

12 THE COURT: I thought you weren't keeping track  
13 of that.

14 THE BAILIFF: (Inaudible)

15 THE COURT: If that's what you noted, I'm sure  
16 that was right. I have A, B and C and G.

17

18 (End of proceedings.)

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C E R T I F I C A T E

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I, MARY DIMOND, do hereby certify that I transcribed the foregoing 166 pages from audio digital recording of the proceedings in the above-entitled matter to the best of my ability.

DATED: October 10, 2011

Mary Dimond

MARY DIMOND

# **EXHIBIT # 5**

Under Advisement Ruling:

Based upon the parties' written motions, their arguments, the expert testimony that was elicited at the hearing, and the case law that was submitted, the Court finds three issues:

1. Whether the State, and only the State, is able to choose whether or not to request a presumption instruction under 28-1381(G), and thus control whether the Defense can present partition ratio evidence on a general DUI or (A) (1) charge.
2. Whether, if and when the Defense is allowed to present partition ratio evidence on the (A)(1) charge, they can only present evidence of that specific Defendant's partition ratio, or evidence as to the variability of partition ratios in general and the effect on the intoxilyzer reading.
3. Whether the Defense can be limited from presenting evidence about breathing patterns, hematocrit, and breath or body temperature (both parties agreed that RFI was relevant and should not have been included in the motion) and their potential effects on the intoxilyzer results, both from a relevance standpoint, and due to the fact that these factors may actually just be factors that affect partition ratio. If the latter is true, can the Defense be limited from introducing expert testimony only on the (A) (2) charge, or on both charges?

This Court will not rehash the definition of "partition ratio" or the role it plays in intoxilyzer results versus blood results. The Court of Appeals provides a very clear explanation in Guthrie v. Jones, 202 Arizona 273, 43 P.3d. 601(AzApp. 2002).

From Guthrie, it is clear that testimony about partition ratios (either general or specific) is not relevant to what is commonly referred to as the "BAC" or "per se charge" under §28-1381 (A)(2), and neither party is challenging the clear language of Guthrie v. Jones in regards to that charge. However, the language of Guthrie is not so straightforward in regards to the "DUI" or the §28-1381(A) (1) charge.

Is the Presumption an Optional Part of the Law?

This Court finds no language in ARS§28-1381(G) limiting the use of the presumption to the State. The Court of Appeals did not change this law or create some kind of special privilege for the State. The language in Guthrie specifically does not talk about the State's ability to use the presumption:

*"The State may elect, however, to establish alcohol concentration in order to take advantage of a statutory presumption."* Guthrie at 604

*"We come then to the question whether, when the State elects to employ breath test results to presumptively establish that a defendant was "under the influence".....Id.*

This language talks about the State making an election, but it is an election to use breath or blood results in order to establish impairment, not an election whether to use the presumption. §28-1381(G) is

law, adopted by the Legislature to aid in the prosecution of impaired drivers. It does not offer an opt out clause; it does not give the State or the Defendant a choice. It is a part of the law.

The language of Guthrie carefully never implies that the State could choose not to use the presumption. It only refers to the State's choice to use the breath result to establish impairment. If the State chooses to use any evidence of the intoxilyzer result to argue that the Defendant was impaired while driving they are taking advantage of the presumption.

Since the presumption is a part of the DUI law that will always apply, the Court will have to decide whether to limit partition ratio evidence on the (A)(1), or DUI charge, on a case by case basis, based on testimony elicited or arguments made by the State. If the State uses any evidence of an intoxilyzer reading to imply that the defendant is impaired, then the Court will allow the defense to question the experts about partition ratio. If that is indeed the case, the Court does find, pursuant to Guthrie, that the State is entitled to a jury instruction limiting the relevancy of *partition ratio evidence* to the (A) (1) DUI charge alone.

#### What Type of Partition Ratio Evidence is Relevant?

This Court has looked to the language in Guthrie to attempt to ascertain the exact meaning of the Court of Appeals' ruling. In certain portions, the Court appears to be saying partition ratio evidence is relevant only when a defendant is attempting to introduce evidence of his specific partition ratio. In other parts of the decision, the Court refers to "partition ratio evidence" in more general terms.

The Guthrie court first holds that "when the State elects to employ breath test results to presumptively establish that a defendant was under the influence while driving", a defendant "may respond by introducing partition ratio evidence to counter the presumption." Guthrie at 604

The Court then says "One means to prove that a *particular defendant* (emphasis added) was not under the influence.....is to establish that *the defendant's individual partition ratio differed....* (Emphasis added) Id at 604.

This language implies that the Court of Appeals finds that partition ratio evidence is relevant if it is evidence of that defendant's particular partition ratio. This reading of the case is bolstered by another statement in the same paragraph of the opinion: "Thus, evidence that a *particular defendant's ratio* (emphasis added) is significantly greater is relevant....."Id. at 604

However, , the Court's language approves more general testimony about partition ratios:

In a per se DUI prosecution...*evidence of variation in individual partition ratios* (emphasis added) is irrelevant and inadmissible. In a traditional DUI prosecution.....partition ratio evidence may be relevant to rebut (that) presumption and thus admissible. Guthrie at 605

The Court also approvingly cites State v. Hanks 772 A.2d 1087 (Vermont 2001). In Hanks, the Vermont Supreme Court specifically found that "evidence of the variability of partition ratios" was relevant and admissible on a DUI charge with a presumption very similar to the Arizona scheme.

In State v. McNeal 210 P.3d 420 (Cal 2009), the California Supreme Court looked to both Hanks and Guthrie for guidance on the partition ratio issue. The California DUI law is very similar to both the

Vermont and Arizona laws- providing rebuttable presumptions that the State can rely on in their DUI (not BAC) prosecutions. The California Supreme Court states:

We reach the same conclusion as the Vermont and Arizona courts. If the defendant in a (traditional DUI case) offers competent evidence showing that the use of a 2100-to-1 conversion ratio may have yielded an inaccurate representation of his blood-alcohol level, introduction of this evidence is permissible.

The California court however, is more explicit in their ruling about what type of partition ratio evidence is relevant:

Evidence showing the defendant had a low partition ratio, and thus a lower concentration of blood alcohol than was reported, could...support an inference that he was not under the influence...*In addition, evidence about the variability of partition ratios in the general population is relevant to raise a reasonable doubt about the accuracy of a defendant's converted blood-alcohol level.* (Emphasis added)

The California Supreme Court clearly interpreted Guthrie to mean that testimony about partition ratios in general is relevant in a DUI case. There is language in Guthrie to support this conclusion, and this conclusion is also supported by the Court in Hanks.

Evidence introduced in the hearing in the instant cases supports the conclusion the McNeal court reached. The defendant's expert witness, Mr. Flaxmayer, testified that an individual's partition ratio could vary within the hour, and could even change while they are blowing into the machine. He was not contradicted by the State's expert witness. When asked by this Court if a partition ratio test obtained by the Defendant at a time after the breath test would be scientifically relevant to the arrest test results, Mr. Flaxmayer said no, it would not be relevant. It is the *variability* of partition ratios, both among the population and in any given defendant, that makes the evidence relevant on the (A) (1) charge. The State cannot prove with any certainty whether a particular defendant's true alcohol level was at or above a .08 at the time of the test because the intoxilyzer results convert to blood results based upon an assumption that everyone's partition ratio is 2100/1, and the amount of alcohol in a person's blood is what dictates impairment Guthrie at 603. While questions can be raised in individual cases about whether that assumption tends to underestimate most people's result, the defense has a right to raise the issue, and cast doubt upon the theory that a .08% intoxilyzer result presumes impairment.

This Court holds, if there is a finding that the State has relied upon or will rely upon an intoxilyzer result in any way to argue impairment, evidence of the variability of the partition ratio in the general population is relevant and admissible.

### Relevancy of Breathing Patterns, Hematocrit and Breath and Body Temperature

The original motion filed by the State addressed the above factors as being not relevant unless there was proof they actually occurred in a specific defendants' case. Given that defense counsel have now submitted People v. Van Gelder 2001 WL 2583854 (CA APP. 7/2011) as persuasive case law, and elicited expert testimony on these factors, the Court will address relevancy and the additional issue of whether these factors are also precluded under Guthrie.

Mike Slonaker, the State's expert criminalist from DPS, testified that breathing patterns and body temperature were only factors that affected the test results in the context of partition ratio and conversion of the breath results to blood results. If this were true, then the correct analysis under Guthrie would be to limit testimony on these variables exactly like partition ratio evidence- only allowable under the (A)(1) DUI charge, and only if the State uses a breath test result to argue impairment. However, Mr. Flaxmayer, the Defense expert, testified that these variables may very well have an impact on the breath reading itself, independent of ever attempting to convert it to a blood alcohol reading.

For example, Mr. Flaxmayer testified that breathing patterns affect the actual breath alcohol reading:

"If we're just looking at the breath alcohol concentration itself; how you breathe and how you blow into the instrument changes the reading you obtain on the instrument, it changes your breath alcohol concentration.....Blood should pretty much remain the same." Hearing at 3:23:55 pm.

He also testified that body and breath temperature could affect breath alcohol readings, independent of any conversion to blood readings. In conclusion, Mr. Flaxmayer said:

"Temperature affects the amount of alcohol in your breath, your breathing affects the amount of alcohol in your breath, regardless if you then take the additional step to use partition ratio to make the calculation, it changed what was in your breath." Hearing at 3:42:55

Mr. Slonaker did not address this exact issue in his testimony. He testified that these factors were related to partition ratio and was not asked about the alcohol being left in the mucous membranes. Mr. Flaxmayer specifically addressed that topic and testified that breathing and temperature were independent factors because of the mucous membrane issue.

While not controlling, the Court finds People v. Van Gelder to be enlightening, since the California Court of Appeals was addressing this exact issue. The expert witness in Van Gelder also testified that factors such as breath and body temperature, breathing patterns and hematocrit were not directly related to partition ratio but were "...physical factors that will cause a breath test result not to be scientifically accurate..." VanGelder at 12. The VanGelder expert also talked about the mucous membranes and their possible effects on the breath test.

The VanGelder Court drew the following conclusions:

"Although breath test results are admissible if a reliable foundation for them is laid, we think that such competent evidence of their potential inaccuracy, because of physical variabilities leading to poor data in sampling, should have been allowed to be considered, as going to the weight to be accorded the testing results.....The expert was proposing that even a correctly

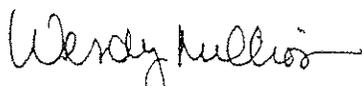
operating breath test device would take in samples that were essentially inaccurate and non-representative of breath-alcohol content.... He did not have to indicate which way the potential inaccuracy would point, as a foundational matter, in order to cast doubt on this part of the testing method. Even a small error could possibly turn a marginally legal reading into an illegal reading." VanGelder at 13.

In the instant cases, both parties questioned the experts at length about the studies, the percentages and the quality of the studies and the science involved. The Court finds that those types of questions should be addressed in each case in front of the trier of fact. This Court heard credible testimony from a qualified expert that breathing patterns (sometime undetectable by the operator), breath and body temperatures (not measured by the operator), and hematocrit could have an impact on a breath test reading *as a reading independent of any blood analysis*. Testimony as to the applicability of these variables goes directly to the accuracy of the intoxilyzer machine, and does not involve the partition ratio evidence ruled irrelevant in Guthrie.

The Court finds, based on the testimony from the evidentiary hearing, that the other factors testified to, i.e. breathing patterns, breath temperature, body temperature, and hematocrit, can impact the results of a breath test independently of their relationship to the partition ratio. Guthrie does not preclude the admission of testimony as to these possible variances on the (A)(2) or per se charge since they are not being used to challenge the conversion of the breath results to blood results but are being introduced as stand alone factors that could impact the breath reading without a conversion.

In addition, the Court finds, based on the expert testimony from the evidentiary hearing, that testimony as to these factors' possible impact on individual breath results is relevant to the BAC charge (and a DUI charge, given the presumption language), even if the defense cannot produce evidence of the Defendant's breathing patterns or temperature or hematocrit at the time of the test. It is the very fact that these factors are variable, among people, and within the same person, that makes them relevant as far as the accuracy of a breath test. The machine produces results that are predicated upon certain presumptions, and the results are different if the presumptions are not accurate in any given case. The Defense is entitled to introduce testimony from qualified witnesses about any factors that may impact the accuracy of that test.

If the Court finds partition ratio evidence to be relevant in a given case, the State is entitled to a jury instruction limiting the relevancy of *partition ratio evidence* to the (A) (1) DUI charge alone. All other portions of the State's motion are denied.



Wendy Million

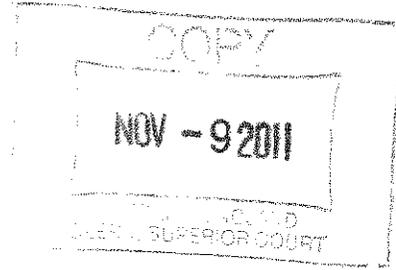
Tucson City Magistrate

August 30, 2011

# **EXHIBIT # 6**

COPY

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13 (520) 791- 4104



11 IN THE SUPERIOR COURT FOR THE STATE OF ARIZONA  
12  
13 IN AND FOR THE COUNTY OF PIMA

14 STATE OF ARIZONA, )

15 Plaintiff, )

16 vs. )

17 )  
18 TUCSON CITY COURT and the )  
19 HONORABLE WENDY MILLION, )  
20 a Special Magistrate thereof, )

21 Defendant Court, )

22 )  
23 )  
24 JOSEPH COOPERMAN & )  
25 HEATHER GRIFFIN, )

26 Real Parties in Interest/Defendants below. )  
27 )  
28 )

NO. C20117903

Tucson City Court Cause  
No. TR10061595  
TR-10081122

STATE'S PETITION  
FOR SPECIAL ACTION

"To Be Assigned"  
Honorable Jon Cornelis  
Div. 10

THIS CASE HAS BEEN INDIVIDUALLY ASSIGNED  
TO DIV 10 DATE 11-9-11

1 THE STATE OF ARIZONA, by the undersigned Principal Assistant  
2 Prosecuting City Attorney, respectfully submits its Petition for Special Action,  
3 pursuant to 17B A.R.S. Rules of Procedure for Special Actions, Rule 4.  
4

5 **I. ISSUE PRESENTED FOR REVIEW**  
6

7 Division 2 of the Arizona Court of Appeals, in *Guthrie v. Jones*, 202 Ariz.  
8 273, 43 P.3d 601 (App. 2002), found that evidence related to a person's individual  
9 physiological characteristics "is irrelevant and inadmissible" in a prosecution under  
10 a per-se DUI charge, and *may* only be potentially introduced by a defendant *if* the  
11 State elects to employ the breath test results to "presumptively" establish that the  
12 defendant was "under the influence". *Id.* The court further clarified it's reasoning  
13 in *State v. Storholm*, 210 Ariz. 199, 109 P3d. 94 (App. 2005), stating that "individual  
14 idiosyncracies or environmental factors" are irrelevant, and thus inadmissible. Given  
15 the above holdings, did Judge Million abuse her discretion by failing to follow the  
16 above caselaw in ruling that she would allow the Defendants to elicit testimony  
17 regarding such individual physiological idiosyncracies, when there was no proof that  
18 either of the Defendants possessed such characteristics, or that either of them  
19 engaged in the proffered hypothetical breathing patterns?  
20  
21  
22  
23  
24

25 **II. STATEMENT OF THE RELEVANT FACTS**  
26

27 The Defendants below, the Real Parties in Interest, Joseph Cooperman and  
28

1 Heather Griffin were arrested for driving under the influence (DUI) and driving with  
2 a BAC at or above .08 (BAC), and they were administered breath tests on the  
3 Intoxilyzer 8000. *See Appendix, Exhibits #1 and #2.* Pursuant to A.R.S. § 28-1321,  
4 Tucson Police Department (TPD) officers administered duplicate breath tests to the  
5 Defendants using an Intoxilyzer 8000. Their results indicated that the Defendants'  
6 alcohol concentrations exceeded 0.08, and the officers cited the Defendants for  
7 having a BrAC  $\geq$  .08, A.R.S. § 28-1381(A)(2). *Id.*

11 On December 22, 2010, the trial court set Defendant Cooperman's matter for  
12 jury review on March 15, 2011. *See Appendix, Exhibit #3.* The State submitted a  
13 *motion in limine* to preclude reference to or testimony regarding breath/blood  
14 conversion, partition ratios, breath or body temperature, or breathing patterns, in both  
15 the Defendants' cases. *See Appendix, Exhibits #4 and #5.* Defendant Cooperman  
16 submitted a response, dated May 26, 2011, to the motion. *See Appendix, Exhibit #6.*

19 The trial court set a hearing, regarding the State's motion on July  
20 26, 2011. The hearing was to take place on July 28, 2011. *See Appendix, Exhibits*  
21 *#7 and #8.* But it was reset to August 16, 2011. *See Appendix, Exhibits #9 and #10.*

24 After the hearing, the trial court issued another order dated August 22, 2011,  
25 indicating that the State's written closing arguments were to be submitted by August  
26 26, 2011. *See Appendix, Exhibit #11.* The State submitted its written closing  
27

1 argument on August 26, 2011. *See Appendix, Exhibit #12.* Defendants Cooperman  
2 and Griffin submitted a joint correction to state's written closing argument on or  
3 about September 1, 2011. *See Appendix, Exhibit #13.*

4  
5         At the hearing, Michael Sloneker, a criminalist called by the State, testified  
6 that both of the individuals in these two cases were tested accurately and  
7 appropriately on the Intoxilyzer 8000 and that "[T]he ability of the instrument (I8K)  
8 to analyze what's in the breath chamber is not affected by how the person breaths."  
9  
10 *See Appendix, Exhibit #14, Transcript of Hearing on August 16, 2011, (Tr.), at pp*  
11 *20, lns 21-25, pp. 21, lns 1-3 & 7-9.*

12  
13  
14         With regard to a person's body or breath temperature, Mr. Slonecker testified  
15 that neither would affect the accuracy of the subject's breath that actually enters the  
16 sample chamber of an Intoxilyzer 8000. *See (Tr.) at pp.21, lns 13-17.* In terms of  
17 a person's blood consistency, or hematocrit, Mr. Slonecker indicated that this does  
18 not have any effect upon the accuracy of the breath sample of a DUI defendant. *See*  
19 *(Tr.) at pp. 21, lns 18-22.*

20  
21  
22         Mr. Slonecker then moved on to an explanation of what partition ratio means:  
23 in comparing the amount of a volatile substance in a liquid with the amount in the air  
24 above it (head space) there is a ratio arrived at in science through Henry's law. For  
25 alcohol breath testing the partition ratio for alcohol has been legally defined in  
26  
27  
28

1 Arizona and in federal law, as 2,100 to 1, meaning that for every part of alcohol  
2 found in a person's lung, there are 2,100 parts of alcohol in their blood. However,  
3 the later studies actually placed the partition ratio at 2300/1 to 2400/1; and thus the  
4 Intoxilyzer actually "under-reports" the amount of alcohol in the blood by about  
5 10%. *See (Tr.) at pp. 21-23.*

8 With regard to the impact of temperature upon the "blood /breath ratio", while  
9 it is true that this can be impacted by the temperature of a person's breath and  
10 breathing patterns, Mr. Slonecker testified that studies show a person would have to  
11 hold their breath 30 seconds or more to heat it enough to affect the result of a breath  
12 test, and that he teaches, and all officers are supposed to tell subjects, to take a deep  
13 breath & then blow into the instrument. *See (Tr.) at pp 23-27.* Furthermore, taking  
14 a deep breath before blowing resets, re-fixes their partition ratio. Therefore,  
15 according to Mr. Slonecker, and the studies, any "breathing pattern effect" upon a  
16 partition ration would be negated by taking a deep breath before blowing, so that the  
17 results would still be within the expected 10% difference between (simultaneous)  
18 breath & blood tests. *See (Tr.) at pp. 26-29.* Finally, Mr. Slonecker explained the  
19 theory behind hematocrit concentrations and that studies show it doesn't matter with  
20 regard to alcohol breath/blood comparisons. *See (Tr.) at pp. 33-35.*

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27 ...

1 With regard to temperature, Mr. Slonecker explained that a person having a  
2 fever could alter his partition ratio; however, a person with a "normal temperature"  
3 is one within the range of 96.8 to 99.8. Moreover, according to Mr. Slonecker, no  
4 study has ever been done as to the effects, on a live person, with a fever, on their  
5 simultaneous breath/blood sample results ratio. *See (Tr.) at pp. 27 & 35.* In short,  
6 as Mr. Slonecker explained "[Y]ou're going to have an accurate – the 8000's  
7 accuracy in no way is impeded by whether or not the individual has held their breath,  
8 whether or not the person has a temperature, so on and so forth. It is what it is. An  
9 accurate instrument." *See (Tr.) at pp. 38.*

10 As to the reason for the difference between blood and breath values, Mr.  
11 Slonecker testified, that the breath test results are typically 10% lower than the blood  
12 test results, because breath testing is from the arterial blood system and blood  
13 sampling is from the venus blood system. *See (Tr.) at pp. 39, lns 1-9.* In response  
14 to a question by the trial court, regarding whether, "hematocrit has nothing to do with  
15 the partition ration thing" Mr. Slonecker replied "Yes." *See (Tr.) at pp. 40, lns 3-8.*

16 As to why arterial (breath) test results are the better indicator of probable  
17 impairment over venus (blood) test results, Mr. Slonecker explained that this would  
18 be because it is the arterial blood that is actually affecting the person. (He explained  
19 earlier - pp's 40-43, that it is the arterial blood supply that affects the brain by  
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1 carrying alcohol to it. Venus blood takes it away.) (*Tr.*) at pp. 50; *State's Exhibits*  
2  
3 *1 & 2 admitted.* And Mr. Slonecker also agreed with the proposition that it would  
4 be impossible to know one's partition ration at any given time. *See (Tr.) at pp. 65.*

5 He noted that the Gullberg study of people arrested showed with a 95%  
6  
7 certainty that the driver's BAC level at the time of driving was as high or higher than  
8 the level reported at the time of their BAC test after arrest. (Which puts them in the  
9 elimination phase.) *See (Tr.) at pp. 43-44.*

11 Mr. Chester Flaxmeyer, an expert called by the defense, agreed with the  
12  
13 premise that the reading from the Intoxilyzer 8000 (in spite of what the  
14 manufacturer's literature states) simply reports an alcohol value that can represent  
15 both as a breath and a blood concentration, (depending upon which units of  
16  
17 measurement you attach to it.) *See (Tr.) at pp. 98.* He said that a properly done  
18 breath test requires the person to take a deep breath and immediately blow into the  
19  
20 instrument as long as they can, or they run out of air. *See (Tr.) at pp. 104, lns 20-23.*

21 With regard to "temperature", Mr. Flaxmeyer expressly agreed that there have  
22  
23 not been any studies showing what happens with people with viral temperatures and  
24 how that affects the amount of alcohol in their breath; nor do we know if water bath  
25 induced temperature variations on breath alcohol are the same as viral induced  
26  
27 temperature variations on breath alcohol levels. *See (Tr.) at 110-111.*

1 With regard to "clearing the effects" of either holding your breath to heat it,  
2 or hyperventilating, breathing quickly, to cool your breath, Mr. Flaxmeyer  
3 characterized both as no longer having an effect on the breath test, if the person first  
4 exhales and then takes a fresh new breath and immediately blows into the instrument:  
5 "If an individual has been holding their breath or they have been hyperventilating  
6 and they stop that behavior, they exhale whatever breath [they] now have, they inhale  
7 a new breath and then immediately exhale that breath into the instrument, that breath  
8 should no longer be affected by either holding their breath or by the hyperventilation.  
9 It should have now all been washed away because the breath that was affected is now  
10 gone." *See (Tr.) at pp. 131.* Mr. Flaxmeyer also agreed that Mr. Slonecker's  
11 testimony on how officers are taught is how officers are taught to administer breath  
12 tests. *Id.*

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18 As to any correlation between temperature and a BAC reading, Mr. Flaxmeyer  
19 agreed that the Cowan study did not find a close correlation between body  
20 temperature, breath temperature and the blood/breath ratio of alcohol content. *See*  
21 *(Tr.) at pp. 132.* And he agreed that the study also found the person with the highest  
22 body temperature, 37.6, C did not have the highest breath temperature or the lowest  
23 breath/blood ratio; that the person with the highest breath temperature, 35.5 Celsius  
24 had neither the highest body temperature nor the lowest breath/blood ratio; the  
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1 person with the lowest body temperature, 36 degrees Celsius, did not have the lowest  
2 breath temperature, but did have the highest partition ratio, 1 to 2765; and that the  
3 lowest breath temperature at 33.3 degrees Celsius, has neither the lowest (body)  
4 breath (wrong) temperature nor the highest breath/blood ratio. *See (Tr.) at pp. 132-*  
5  
6  
7 *133.*

8 In fact, Mr. Flaxmeyer agreed with a conclusion of the Cowan study - that  
9 there are so many factors at play that there is no discernable effect of body or breath  
10 temperature on the breath/blood BAC testing when the people had "normal" body  
11 temperatures of between 96.8 to 99.8 degrees. *See (Tr.) at pp. 135-136.* Mr.  
12 Flaxmeyer also agreed that most scientists truly couldn't care less about the  
13 hematocrit's effect upon the partition ration, that it is the least of the factors. *See*  
14 *(Tr.) at pp. 140-41.* Mr. Flaxmeyer also testified that, while he would never tell a  
15 court what is "relevant" or not, that he did not consider the partition ratio to be  
16 scientifically relevant, unless there was a blood sample drawn near the time of the  
17 DUI. *See (Tr.) at pp. 125.*

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22 On September 7, 2011, the trial court held that if the State relies upon an  
23 Intoxilyzer result in any way to argue impairment, then evidence of partition ration  
24 will be relevant and admissible. *See Appendix, Exhibit #15 (trial courts minute entry*  
25 *entered of record on September 7, 2011, but signed on August 30, 2011).* The court  
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28

1 said that based on the testimony from the hearing about the factors testified to; i.e.  
2 breathing patterns, breath and body temperature, and hematocrit, that they can impact  
3 the results of a breath test, independently of their relationship to partition ratio; and  
4 that *Guthrie* does not preclude the admission of testimony on these variables on the  
5  
6  
7 *per se* charge, as they are being introduced as “stand alone” factors.

8         The court found that testimony about these factors, and their impact on both  
9 the BAC charge and DUI charge - given the presumption - are admissible, even if the  
10 Defendants cannot produce evidence of their own breathing patterns or temperature  
11 or hematocrit at the time of the tests. The court said the very fact that these factors  
12 vary among people, and within the same person, makes them relevant. The trial court  
13 found that the intoxilyzer produces results, based on certain presumptions; and that  
14 the results may not be accurate if the presumptions are not correct. Thus the court  
15 said that the Defendants were entitled to introduce testimony, from qualified  
16 witnesses, about any factors that may impact the accuracy of their tests. Lastly, the  
17 trial court said that if it finds that the partition ratio is relevant in a given case, then  
18 the State will be entitled to a jury instruction limiting the relevancy of the partition  
19 ratio evidence to the DUI charge only; but denied all other portions of the State’s  
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21 Motion. *Id.*

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1           These rulings were made despite the language in *Guthrie v. Jones*, 202 Ariz.  
2 273, 43 P.2d 601 (App. 2002) that “in a per se prosecution under A.R.S. §28-  
3 1381(A)(2), evidence of individual partition ratios, and multiple factor such as body  
4 temperature, phase of alcohol metabolism, ventilation perfusion abnormalities,  
5 ethanol in the mouth, regurgitation of alcoholic stomach contents ... gender, blood  
6 consistency, breathing patterns and environmental factors, such as barometric  
7 pressures and elevation above sea level” are irrelevant and inadmissible.” *Id.* The  
8 trial court later granted a stay for a period of 30 days from September 14, 2011. *See*  
9 *Appendix, Exhibit #16, trial court minute entry, dated September 14, 2011.*

10  
11           Due to the complexity, and length of the proceedings, the State made a request  
12 for a transcript, which the Tucson City Court granted on September 22, 2011. *See*  
13 *Appendix, Exhibit #17, Order for Transcript, dated September 22, 2011.* The  
14 transcript only became available on or about October 12, 2011. The trial Court  
15 initially refused to continue the stay beyond October 14, 2011, denying the State’s  
16 motion for a continued stay. *See Appendix, Exhibit #18, Order denying stay, dated*  
17 *September 30, 2011.* However, on October 14, 2011, Court granted two more weeks  
18 for the State to seek a stay from this Court, as to Defendant Cooperman. *See*  
19 *Appendix, Exhibit #19, Order for Stay, dated October 14, 2011.* But, as to Defendant  
20 Griffin, the court denied any continued stay and set the matter for review on October  
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1 17, 2011, at 2:00 p.m. *See Appendix, Exhibit #20, Order denying stay, dated October*  
2 *17, 2011.*

3  
4 The State now files this Petition for Special Action Relief, pursuant to 17B  
5 A.R.S. Rules of Procedure for Special Actions, Rule 4.

### 6 7 **III. JURISDICTIONAL STATEMENT**

8 Special actions call for extraordinary relief; however, acceptance of  
9 jurisdiction over such actions is highly discretionary. *See* 17B A.R.S. Special  
10 Actions, Rules of Proc., Rule 3, (Special Action Rule), State Bar Committee Note.  
11 Additionally, the petitioner "must always carry the burden of persuasion as to  
12 discretionary factors." *Id.* Nonetheless, jurisdiction is appropriate where any of the  
13 following discretionary factors are present: the petitioner has no equally plain and  
14 adequate remedy by appeal; the action involves an issue of first impression; the  
15 action contains a purely legal question; and, the issues are of statewide concern. *Id.*

16  
17 All of these factors are not required to be present for this Court to exercise  
18 discretionary jurisdiction; but rather, any one is sufficient. As was clearly said in  
19 *Martin v. Reinstein*, 195 Ariz. 293, ¶9, 987 P.2d 779, 786 (App. 1999):

20  
21 [t]he exercise of special action jurisdiction is appropriate if a case raises  
22 issues of first impression *or* involves purely legal questions, questions  
23 of public importance, *or* issues that are likely to arise again.

24  
25 *Id.*, ¶9, 987 P.2d at 786. (*Emphasis added, citations omitted.*)

1           Because all of these discretionary factors are present in this case, jurisdiction  
2 is appropriate.  
3

4           **A.     The State Has No Adequate Remedy by Appeal.**

5           Jurisdiction on a special action will usually be denied where the petitioner has  
6 an adequate remedy by appeal. *King v. Superior Court*, 138 Ariz. 147, 673 P.2d 787  
7 (1983); *Graham v. Ridge*, 107 Ariz. 387, 489 P.2d 24 (1971). However, appeals are  
8 permitted only where authorized by statute. *State v. Fayle*, 114 Ariz. 219, 560 P.2d  
9 403 (1976); *State v. Lopez*, 26 Ariz. App. 559, 550 P.2d 113 (1976). A.R.S. § 13-  
10 4032 provides that authorization:  
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14           An appeal may be taken by the state from:

- 15           1. An order dismissing an indictment, information or complaint or  
16 count of an indictment, information or complaint. 2. An order granting  
17 a new trial. 3. A ruling on a question of law adverse to the state when  
18 the defendant was convicted and appeals from the judgment. 4. An  
19 order made after judgment affecting the substantial rights of the state or  
20 a victim, except that the state shall only take an appeal on an order  
21 affecting the substantial rights of a victim at the victim's request. 5. A  
22 sentence on the grounds that it is illegal, or if the sentence imposed is  
23 other than the presumptive sentence authorized by section 13-604 or 13-  
24 701. 6. An order granting a motion to suppress the use of evidence.  
25 7. A judgment of acquittal of one or more offenses charged in an  
26 indictment, information or complaint or count of an indictment,  
27 information or complaint that is entered after a verdict of guilty on the  
28 offense or offenses.

25 *Id.*

27 ...

1 The present case involves none of the above situations, since the order of the  
2 trial court is one denying the State's motion to preclude, or limit, the Defendants' use  
3 of certain evidence and arguments; and thus the State can not appeal. Since the State  
4 has no statutory right to appeal, and this situation is likely to arise again, this case is  
5 appropriate for special action jurisdiction.  
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7  
8 **B. The Trial Court's allowance of the**  
9 **proffered evidence constitutes an abuse of discretion.**

10 The only questions appropriate for special action jurisdiction are whether a  
11 lower court has failed to exercise discretion which it had a duty to exercise, failed to  
12 perform a duty required by law, or *rendered a decision that was arbitrary and*  
13 *capricious and an abuse of discretion.* 17B A.R.S. Special Actions, Rules of Proc.,  
14 Rules 3(a) and (c). (*Emphasis added*). "An 'abuse of discretion' is discretion  
15 manifestly unreasonable, or exercised on untenable grounds, or for untenable  
16 reasons." *Quigley v. City Court of City of Tucson*, 132 Ariz. 35, 643 P.2d 738 (Ct.  
17 App. 1982)(*citing State v. Williams*, 27 Wash. App. 430, 618 P.2d 110 (1980)). An  
18 abuse of discretion also occurs when a factual finding, or inference drawn therefrom,  
19 is not justified by, and is clearly against, reason and evidence. *See State v. Chapple*,  
20 135 Ariz. 281, 660 P.2d 1208 (1983).  
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26 In this case, the trial court abused its discretion in holding that *Guthrie* does  
27 not preclude the admission of testimony as to physiological variables, on the *per se*  
28

1 charge, inasmuch as they are being introduced as "stand alone" factors. It also erred  
2 in finding that testimony as to these factors, and their use on both the BAC and DUI  
3 charges are admissible, given a general presumption of impairment, - even if the  
4 Defendants cannot produce evidence of their breathing patterns, temperature, or  
5 hematocrit at the time of the tests. It erred in finding that the very fact that these  
6 factors vary, among people, and within the same person, makes them relevant.  
7

8  
9  
10 **C. The Trial Court Has Committed Plain and Obvious Error.**

11 This Court has additional discretion to accept jurisdiction of a special action  
12 where the lower court has committed "plain and obvious error." *State ex rel. Collins*  
13 *v. Superior Court of Maricopa County*, 129 Ariz. 156, 159, 629 P.2d 992, 995  
14 (1981). The test for exercising discretionary jurisdiction is whether the lower court's  
15 ruling "was without precedent or support in the law and [can] not be justified." *Id.*;  
16 *Western Waste Service Systems, Inc. v. Superior Court*, 120 Ariz. 90, 584 P.2d 554  
17 (1978).  
18  
19  
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21 The trial court has also refused to acknowledge that the proffered evidence is  
22 speculative, irrelevant and that it would mislead the jury. Moreover, the Defendants  
23 below, have failed to show why Rules, 401, 402 and 403 would not preclude the  
24 proffered hypothetical physiological idiosyncracies as irrelevant or inadmissible in  
25 a prosecution under either A.R.S. § 28-1381(A)(1), without the statutory presumption  
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28

1 of impairment or A.R.S. §28-1381(A)(2). The trial court thus erred by misapplying  
2  
3 *Guthrie v. Jones*, 202 Ariz. 273, 43 P.3d 601 (App. 2002), and *State v. Storeholm*,  
4 210 Ariz. 199, 109 P3d. 94 (App. 2005).

5 The trial court's ruling is additionally improper as it allows the Defendants to  
6  
7 admit testimony or evidence that is not only irrelevant, but which may be misleading  
8  
9 to the jury. Moreover, because it allows the Defendant to elicit testimony and proffer  
10  
11 evidence of hypothetical individual physiological or biological characteristics, which  
12  
13 are neither relevant or admissible in a per se DUI prosecution, the trial court's ruling  
14  
15 constitutes "plain and obvious error", which is "without precedent or support in the  
16  
17 law and [can] not be justified." *State ex rel. Collins v. Superior Court of Maricopa*  
*County*, 129 Ariz. 156, 629 P.2d 992, 995 (1981); *Western Waste Service Systems,*  
*Inc. v. Superior Court*, 120 Ariz. 90, 584 P.2d 554 (1978).

18 **D. The Possible Consideration of Individual**  
19 **Physiological Or Biological Characteristics,**  
20 **By a Jury in a Per Se DUI Prosecution Presents a**  
21 **Question of Significant, Statewide Public Importance.**

22 Special action jurisdiction should be accepted where the issue presented is of  
23  
24 significant public importance. *See e.g., State v. Smith*, 123 Ariz. 243, 599 P.2d 199  
25  
26 (1979); *State v. Delgado*, 174 Ariz. 252, 848 P.2d 337 (App. 1993). As recognized  
27  
28 by the Arizona Supreme Court, the State and the public have a compelling interest  
in "reducing the terrible toll of life and limb on our highways" that results from

1 drunk driving. *Fuenning v. Superior Court*, 139 Ariz. 590, 595, 680 P.2d 121, 126  
2 (1983); *State v. Superior Court In and For Cochise County (Blake)*, 149 Ariz. 269,  
3 274, 718 P.2d 171, 176 (1986). The trial judge's reasons for allowing the Defendants  
4 to elicit testimony and proffer evidence regarding hypothetical individual  
5 physiological characteristics has an effect upon every per se DUI case before that  
6 court, and is contrary to the law and the facts without justification. It is also a refusal  
7 to follow the controlling holding of a higher court, and if followed by other judges,  
8 would lead to nullification of the authority of Arizona's appellate courts, and  
9 therefore is an issue of significant public importance.

#### 14 **IV. LEGAL ARGUMENT**

##### 15 **A. Absent a Sufficient Foundational Showing** 16 **by the Defendants, Any Testimony Regarding Partition** 17 **Ratios, or Other Physiological Variables, Is Irrelevant.**

18 17A A.R.S. Rules of Evid., Rule 402 states that:

19 All relevant evidence is admissible, except as otherwise  
20 provided by the Constitution of the United States, by the  
21 Constitution of Arizona or by applicable statutes or rules.  
22 *Evidence which is not relevant is not admissible.*

23 17A A.R.S. Rules of Evid., Rule 402. (*Emphasis added*)

24 The court of appeals, in *Guthrie v. Jones*, 202 Ariz. 273; 43 P.3d 601 (App.  
25 2002), reviewed the subject of partition ratios and held that: "In a per se DUI  
26 prosecution under A.R.S. § 28-1381(A)(2), evidence of variation in individual  
27  
28

1 partition ratios is *irrelevant and inadmissible.*” Id. at 5. (*Emphasis added*). The  
2 court of appeals later clarified its ruling, somewhat, in *State v. Storholm* 210 Ariz.  
3 199, 109 P3d. 94 (App. 2005) by indicating that “individual idiosyncracies or  
4 environmental factors” are not at all relevant in any prosecution under a per se DUI  
5 charge. Thus, such arguments and defenses are never relevant or admissible when  
6 considering the charge under A.R.S. §28-1381(A)(2).  
7

8  
9 It has been the position of the State that general evidence, regarding the  
10 “possible effects” of partition ratios, breathing patterns and a hypothetical blood  
11 composition (hematocrit) upon the accuracy of either of the Defendants’ breath tests,  
12 in either case, is mere speculation, irrelevant and immaterial to both charges.  
13  
14

15 During the hearing, in response to the trial court’s question about whether a  
16 defendant’s individual partition ratio would be relevant to his BAC reading, on the  
17 instrument, Mr. Flaxmeyer specifically stated: “I as a scientist would never  
18 (inaudible) try to tell the Court ... The problem is if I am a defendant, unless the  
19 police officer draws blood in close proximity to the time.... I can’t prove it was the  
20 same value....” The trial court then asks “scientifically would it be relevant?” And  
21 Mr. Flaxmeyer specifically states: “*I don’t believe it is.*” See *Transcript at pp. 125,*  
22 (*Emphasis provided*) Thus, if it is not scientifically relevant, this begs the question:  
23 How can it possibly be relevant to the issues at all?  
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1           **B. Comparisons Between Breath and Blood Values Should**  
2           **Be Precluded, Unless a Defendant's Own Blood Test is Offered.**

3           The Department of Public Safety defines alcohol concentration in terms of  
4           “grams of alcohol per 100 milliliters of blood” or “*grams of alcohol per 210 liters*  
5           *of breath.*” (*Emphasis added*). Department of Public Safety, Arizona Administrative  
6           Code R9-14-401, 9 A.A.C. 14. The clear and unambiguous wording of the code  
7           indicates there are two *equally viable* methods to measure a suspect's alcohol  
8           concentration: blood and breath. In this case the Defendants submitted to breath  
9           tests. The rules of evidence clearly state, “(a)ll relevant evidence is admissible,  
10          except as otherwise provided by the Constitution of the United States, by the  
11          Constitution of Arizona or by applicable statutes or rules. And as previously  
12          referenced above, “*evidence which is not relevant is not admissible.*” (*Emphasis*  
13          *added*). *17A A.R.S. Rules of Evid., Rule 401*. Rule 403 states “relevant evidence” is  
14          admissible if it tends to prove or disprove a fact in issue. *17A A.R.S. Rules of Evid.,*  
15          *Rule 403*. This is where a comparison between blood and breath runs afoul of the  
16          relevance test - the Defendants' blood alcohol concentration is not available; and  
17          thus any hypothetical evidence presented about the difference between Breath  
18          Alcohol Concentration (BrAC) and Blood Alcohol Concentration (BAC) is irrelevant  
19          and should have been precluded as mere speculation.  
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1           Thus, the specific and critical error that the trial court committed, in not  
2 excluding body temperature, hematocrit (blood consistency) and breathing patterns,  
3 is that these factors are precisely the type of “multiple factors” that the court of  
4 appeals included within its discussion on excluding partition ratio evidence, absent  
5 evidence of the individual defendant’s characteristics,  
6  
7

8           During the hearing, an expert called by the Defendants, Chester Flaxmeyer,  
9 agreed that one could not parse out the difference: “When he tried to look at  
10 partition ratio, he could not parse out the difference – and his final sentence was that  
11 it was subsumed into the larger potential error of the partition ratio.” *See (Tr.) at pp.*  
12 *135, lns 2-5.* Mr. Flaxmeyer also agreed that this was because it was difficult to see  
13 a small error that is encapsulated in a larger error; i.e. because partition ration  
14 involves many more factors than just breath or body temperature. *Id.*  
15  
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17

18           In fact, as the Court in *Guthrie* indicated, these type of individual  
19 characteristics “*may*” only be relevant “*when the State uses breath test results to take*  
20 *advantage of the § 28-1381(H) (now § 28-1381(G)<sup>1</sup>).*” (*Emphasis added*) *Id.*  
21  
22

23 ...  
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26 <sup>1</sup> 28-1381(G) - the presumption states in part (3.) If there was at that time 0.08 or  
27 more alcohol concentration in the defendant’s blood, breath or other bodily  
28 substance, *it may be presumed* that the defendant was under the influence of  
intoxicating liquor.

1 Taken in context and in sequence this becomes very clear from their quotes:

2  
3 Under subsection (A)(1), the State need not prove that a defendant's  
4 alcohol concentration was at or above any particular level; it need prove  
5 only that the defendant was 'impaired to the slightest degree' as a result  
6 of being 'under the influence of intoxicating liquor.' The State may  
7 elect, however, to establish alcohol concentration in order to take  
8 advantage of a statutory presumption. At the time of Guthrie's offense,  
9 the presumption was that, if an 'analysis of a defendant's blood, breath  
10 or other bodily substance' reveals that 'there was ... 0.10 or more  
11 alcohol concentration in the defendant's blood, breath or other bodily  
12 substance [within two hours of driving], ... the defendant was under the  
13 influence of intoxicating liquor. A.R.S. §28-1381(H)(3) (1998). The  
14 legislature has since substituted 0.80 for 0.10 alcohol concentration.  
15 See A.R.S. §28-1381(G) (Supp.2001).

16  
17 We come then to the question whether, when the State elects to employ  
18 breath test results to presumptively establish that a defendant was  
19 'under the influence' while driving, the defendant may respond by  
20 introducing partition ratio evidence to counter the presumption. We  
21 answer that question in the affirmative....

22  
23 One means to prove that a particular defendant was not under the  
24 influence of intoxicating liquor while driving, despite a breath alcohol  
25 reading exceeding .10 is to establish that the defendant's individual  
26 partition ratio differed from the standard 2100:1 ratio to a significant  
27 degree.... Thus, evidence that a particular defendant's ratio is  
28 significantly greater is relevant, for it would have a tendency to rebut  
the presumption that the defendant was 'under the influence' at a certain  
breath alcohol concentration. (*Citation omitted*).

29 *Guthrie*, at 276, 43 P.3d, at 604.

30  
31 Thus we see that each time the appeals court in *Guthrie* refers to "the  
32 presumption" of intoxication, they are referring to the statutory presumption in what  
33 is now A.R.S. §28-1381(G).

1           There is no such “presumption” at issue in this case, as the State never sought  
2  
3 to take advantage of the above statutory presumption and the other charge was the  
4 per se DUI/BAC charge, under §28-1381(A)(2).

5           To at least some extent, the court of appeals explained the reasoning of  
6  
7 *Guthrie* in deciding *Storholm*. *State v. Storholm*, 210 Ariz 199, 109 P.3d 94 (App.  
8 2005). In *Storholm*, the defendant challenged his conviction for Aggravated DUI on  
9 the grounds that *Guthrie* made it impossible for him to rebut the breath evidence  
10 collected against him. *Id.* at ¶9, 109 P.3d at 95. That court held that a defendant is  
11 entitled to use “blood test evidence” to rebut a DUI charge based on breath test  
12 results. *Id.* at ¶12, 109 P.3d at 96. And it was in this context that the court re-stated  
13 its holding in *Guthrie*, by articulating that “individual idiosyncracies or  
14 environmental factors” were irrelevant for prosecution under a per se DUI charge.  
15 *Id.* at ¶10, 109 P.3d at 95 .

16           Accordingly, as set forth above, it is only where the State seeks to utilize the  
17  
18 statutory presumption that an association is created between BrAC and BAC (within  
19 the presumption); and only under this circumstance, a defendant *may* be entitled to  
20 have the jury consider their particular partition ratio. Otherwise, the blood breath  
21 partition ratio is irrelevant and inadmissible. However, the appeals court  
22  
23 has said that *individual physical characteristics of the defendant are not ever*  
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1 *relevant* in a per se DUI/BAC prosecution.

2  
3 Also, unlike the defendant in *Guthrie* regarding his partition ratio, neither of  
4 these Defendants has made any offer of proof as to who would offer evidence of what  
5 their individual blood hematocrit, breathing patterns or breath temperatures were at  
6 or near the time of their individual breath testing. Absent such evidence at trial  
7 neither of these Defendants would be in the same position as the defendant in  
8 *Guthrie*, where the court noted in reserving only his conviction for DUI, (A)(1), "...  
9 that the municipal court erred by precluding Guthrie's efforts to establish that *his*  
10 *particular partition ration on the date* in question differed significantly from the  
11 norm, ...." *Id.*, at 277, 43 P.3d, at 605. (*Emphasis added.*) Neither of the Defendants  
12 in this case has proffered any proof that he has individual evidence of any of these  
13 four factors, or that he had a blood sample drawn near the time of his breath tests.

14  
15 **D. The Defendant's Physical State at the Time of Breath Testing**  
16 **Is Not Relevant to the Functioning or Accuracy of the Intoxilyzer.**

17  
18 Any lack of correlation between blood and breath alcohol levels is irrelevant  
19 in a prosecution for a DUI/BAC charge. *State v. Esser*, 70 P.3d 449 (Ariz. App.  
20 Div.2, 2003). In discussing variables, Dr. Dubowski, a leading scholar in the field  
21 of alcohol research, states that there is a correlation between values of alcohol in  
22 various tissues, but variances in alcohol partition exist, and the ability to determine  
23 if the subject is post-absorptive is often impossible. Therefore all of these factors  
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1 make it impossible or infeasible to convert alcohol concentration of breath or urine  
2 to the simultaneous blood alcohol concentration. (*Emphasis added*). Dubowski, K.  
3 M. *Pharmacology of Alcohol: Impairment of Driver Performance. Jour of Studies*  
4 *on Alcohol, Supp. No. 10, p105-106, 1985.* There is also a natural physiological  
5 barrier to comparing venous blood alcohol contemporaneous to arterial blood alcohol  
6 concentration which are the source of all breath alcohol concentration samples. After  
7 a person consumes alcohol and during absorptive, and post-absorptive phases, there  
8 is only one point in time where there is an identical match in BAC<sup>2</sup>. A.W. Jones,  
9 *Physiological Aspects of Breath-Alcohol Measurement, Alcohol, Drugs and Driving,*  
10 *Vol. 6 #2.*

15 Almost all of the studies conducted to check the accuracy of the Intoxilyzer  
16 5000, which necessarily apply to the 8000, are comparisons of a venous blood draw  
17 values with the breath test values. (*See Hayward and Fox, Effect of Hyperthermia*  
18 *on Breath-Alcohol Analysis J. of Stud. on Alcohol, #10, (July 1985), Harding,*  
19 *Laessig, and Field, Field Performance of the Intoxilyzer 5000: A comparison of*  
20  
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23 <sup>2</sup> During the absorptive phase the human body absorbs alcohol and it is suffused  
24 through the all water bearing tissues (i.e. muscle tissue, etc.). During the  
25 absorptive phase arterial blood has a higher BAC value than venous blood until all  
26 of the tissues of the body are completely suffused with alcohol. It is at this  
27 moment of equilibrium that arterial and venous values agree. Then during the  
28 post-absorptive phase, the venous blood drawing alcohol back out of the various  
tissues will carry a higher BAC than the arterial blood.

1 Blood- and Breath-Alcohol Results in Wisconsin Drivers, J. Forensic Sci. #5(5):  
2 1022-1028 (1990), etc.). Much of this study discusses how physical variability  
3  
4 “could possibly” affect the results of a breath test in comparison to a blood test, if the  
5 defendant had: elevated body temperature, elevated breath temperature, hypo/hyper  
6 ventilation.  
7

8 This study is often presented without the defendant, or anyone else ever taking  
9 the stand, and giving evidence of his own individual characteristics or  
10 contemporaneous blood test, and thus it has no basis in fact, and therefore it is not  
11 at all relevant. Additionally, as indicated, the comparison of a subject’s hypothetical  
12 blood value compared to their breath value has no relevance in a DUI/BAC trial.  
13  
14 Also, as established during the hearing below, regarding the accuracy in measuring  
15 any BAC in a breath sample, neither a person’s breathing pattern, nor breath or body  
16 temperature, or hematocrit, impact the ability of the Intoxilzyer instrument to  
17 accurately analyze what is in the sample chamber. *See (Tr.), at p. 21, lines 7-22.*  
18  
19  
20

21 Unlike the municipal court in *Guthrie*, this trial court has had the benefit of  
22 expert witness testimony from two scientists, Mike Sloneker from the blood and  
23 breath testing for alcohol and other substances division at the DPS lab in Phoenix,  
24 and Chester Flaxmayer, a former DPS lab worker in the same division, who is now  
25 in private practice as a forensic scientist. Both scientists, which the trial court  
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1 recognized as expert witnesses in this field of breath and blood alcohol testing,  
2 agreed that blood hematocrit (blood concentration) was irrelevant to the issue of what  
3 might affect the differences between contemporaneous breath and blood tests. Mr.  
4 Sloneker testified that one study by Dr. A.W. Jones, "Physiological Aspects of  
5 Breath-Alcohol Measurements" Alcohol, Drugs and Driving, Vol. 6, (1990), pp 1-25,  
6 at page 15, concluded, "In practice, however, it seems that there are so many other  
7 physiological factors and biological variations inherent in the quantitative  
8 measurement of BrAC that this hematocrit effect is completely submerged". The  
9 State asks this Court to therefore exclude it in both cases as irrelevant to whether a  
10 State's valid breath test result would properly show if a defendant was under the  
11 influence of alcohol.  
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17 The testimony of Mike Sloneker, was that he had looked at the supporting  
18 documentation provided by the Tucson Police Department in each case separately,  
19 including the breath test printouts and the checklists used as well as the complete  
20 narrative of each case, and was able to conclude that both Defendants here had been  
21 given valid duplicate breath tests in each case. He further testified that neither case  
22 provided any indication that the individual Defendant's breath test was affected by  
23 their breathing pattern or breath or body temperature. Mr. Sloneker further testified  
24 that in his opinion, when the breath tests are given by the police according to their  
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1 training, each subject is instructed to take a deep breath and then blow as long as he  
2 can or until told to stop. He explained that even if a subject holds their breath for up  
3 to 30 seconds; which some studies show can affect the breath alcohol test result by  
4 raising the result (by heating the breath), or breaths rapidly for 20 seconds, which  
5 those studies also show can lower that result (by cooling the breath); it will have no  
6 effect upon a properly administered breath test with the Intoxilyzer 8000, because by  
7 taking that a new, deep breath before blowing into the device, the subject would  
8 physically negate those prior breathing effects upon his last, prior breath. Mr.  
9 Flaxmayer said he agreed with this testimony, if a new breath was taken by the  
10 subject for each breath test.

15 Both experts agreed that the studies in the field, such as the one by Dr. A. W.  
16 Jones, "How Breathing Techniques Can Influence the Results of Breath-Alcohol  
17 Analysis," Med. Sci. Law, Vol. 22, (1982), and their own experiences did indicate  
18 that if a subject held their breath for at least 20-30 seconds, or breathed very rapidly  
19 for up to 20 seconds that the resulting breath test, while completely accurately  
20 measured by an Intoxilyzer 8000, would be slightly different from a blood sample if  
21 it were taken contemporaneously with the breath testing. But both also agreed  
22 without reservation, that if the breath test was properly given by the police, as they  
23 are instructed to give them, and each subject took a deep breath and then blew into  
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1 the device, that it would remove any possible effect from such breathing patterns.  
2 This would seem to conclusively show that such breathing pattern evidence would  
3 therefore be irrelevant as it physically could not have any effect upon the properly  
4 administered breath tests of each of these two Defendants.  
5

6  
7 Turning to breath or body temperature effects upon the differences between  
8 hypothetically simultaneous breath and blood samples of individuals, both expert  
9 witnesses agreed that there has never been a study showing how a person with an  
10 illness caused fever and a higher than normal body and breath temperature would  
11 possibly affect those tests. The testimony from both experts was that there had been  
12 a study, by Fox and Hayward, "Effect of Hyperthermia on Breath Alcohol Analysis,"  
13 Journal of Forensic Science, Vol 34, (July, 1989), pp. 836-841, in a hot tub setting  
14 years ago that raised the body temperature of test subjects who were dosed with  
15 alcohol and then the breath and blood samples were compared, to reveal that for  
16 every degree Celsius the body temperature was raised produced an increased BrAC  
17 of 8.6%.  
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22 However they both agreed that a later study by J. Mack Cowan, "The  
23 Relationship of Normal Body Temperature, End-Expired Breath Temperature, and  
24 BAC/BrAC Ratio in 98 Physically Fit Human Test Subjects," Journal of Analytical  
25 Toxicology, Vol. 34, (June 2010), found that with subjects with "normal" body  
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28

1 temperatures, from 36.1 to 37.8 degrees Celsius, (96.98 to 100.4 degrees Fahrenheit),  
2 there was not a direct correlation between body temperature and the breath alcohol  
3 result. Both experts agreed that the following conclusions from the study were true:  
4  
5 1) The person with the highest body temp (37.6C) had neither the highest breath  
6 temp nor the lowest BAC/BrAC ratio, 2) The person with the highest breath temp  
7 (35.5C) had neither the highest body temp nor the lowest BAC/BrAC ratio, 3) The  
8 person with the lowest body temp (36.0C) did not have the lowest breath temp but  
9 did have the highest partition BAC/BrAC ratio (1:2765), and 4). The person with the  
10 lowest breath temp (33.3C) had neither the lowest body temp nor the highest  
11 BAC/BrAC ratio. Both experts agreed that what this showed was that there was no  
12 direct relationship shown between body temperature, breath temperature and the  
13 effect it would have on simultaneous breath and blood tests for alcohol concentration  
14 of "normal" people.

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20 Given the lack of such a correlation in this study, and the lack of any other  
21 studies on sick subjects willing to undergo simultaneous breath and blood alcohol  
22 concentration tests while running fevers from their illnesses, it appears that any  
23 consideration of body temperature, or breath temperature, on the comparison of  
24 simultaneous breath and blood testing - which was not done in either of these two  
25 DUI cases by the Defendants - is entirely irrelevant and must be excluded.  
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1 In summary then, the testimony of these two experts was much more in  
2 agreement than disagreement on the pivotal points raised in the State's motion to  
3 exclude general testimony and evidence of partition ratios, hematocrit, breathing  
4 patterns and body and breath temperature, especially in light of the lack of any  
5 contemporaneous blood testing, or other evidence having been produced by either  
6 of these two Defendants that might have shown their individual characteristics near  
7 the time of their breath tests by the State.  
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10

11 What was made clear by the two experts, particularly by Mr. Sloneker, is that  
12 proper, accurate breath testing with the Intoxilyzer 8000, like with other properly  
13 used breath alcohol measuring instruments, will produce alcohol concentration  
14 results that under-report what simultaneous blood testing would show, by  
15 approximately 10%. Study after study has shown this for the last 50 years or more,  
16 according to both witnesses. He explained that the main reason for this in succinct  
17 steps. First, the study by R.G. Gullberg, "Comparing Roadside with Subsequent  
18 Breath Alcohol Analysis and Their Relevance to the Issue of Retrograde  
19 Extrapolation, Forensic Sciences International," Vol. 57, (1992) pp. 198-201, found  
20 with a 95 % confidence level that the subjects being breath tested in DUI arrest  
21 settings, and who later were also blood tested, were in the elimination phase.  
22 Second, that breath alcohol concentration is in equilibrium with the arterial blood in  
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1 the lungs, which then goes to the brain and produces impairment. Third, that blood  
2 testing measures the alcohol concentration in the venous blood system, not the  
3 arterial system (which is deeper and potentially more painful to reach). Fourth that  
4 arterial blood is typically lower in alcohol concentration than the venous blood  
5 during the elimination phase. Therefore, even if the breath test is 100% in sync with  
6 the arterial blood alcohol concentration, it will still be lower than the venous blood  
7 concentration. Thus the expert scientific evidence brought before this Court shows  
8 why breath alcohol concentration results in both of these two cases are not  
9 realistically affected by either partition ratios, hematocrit, breathing patterns, or  
10 body or breath temperatures. All such evidence should therefore be excluded from  
11 both of their trials.

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17 **E. Even That Which Is Relevant May Be Excluded If**  
18 **Its Probative Value Is Outweighed by the Danger of**  
19 **Unfair Prejudice, Confusion of the Issues or Misleading the Jury.**

20 In determining the issue of certain factors, this Court is not bound to cease its  
21 inquiry at the line of relevancy and admissibility; rather, the provisions of Rules 401  
22 and 402 are tempered by Rule 403. In relevant portion that Rule provides that  
23 “evidence may be excluded if its probative value is substantially outweighed by the  
24 danger of .... confusing of the issues, misleading the jury. As presented above, the  
25 court in *Guthrie, supra*, discussed (at some length) the fact that evidence that a  
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1 *particular* defendant's ratio is greater is relevant - for it would have the tendency to  
2 rebut the presumption that *the* defendant was under the influence at a certain breath  
3 alcohol concentration. And at first blush it would appear that the court's opinion  
4 offers some degree of support for the contentions of the Defendants. However, it is  
5 important to note that the appeals court used the words "*particular*" and "*individual*"  
6 rather than the words "a" or "ANY" in addressing this rather critical issue of  
7 relevancy. Thus logic dictates that any defendant who wishes to challenge the  
8 "standard" or "generally accepted" 2100:1 ratio<sup>3</sup> on which the Intoxilyzer (5000 or  
9 8000) is based, must present evidence of his *own* ratio at the time of the test - the  
10 probative value of any *other* evidence (such as a "hypothetical" person) is  
11 substantially outweighed by the danger of unfair prejudice and could only serve to  
12 confuse the issue and/or mislead the jury. *Guthrie* offers guidance when other types  
13 of evidence are offered, for the purpose of calling into question the breath test  
14 results. For example, it is anticipated that counsel for the Defendants will touch  
15 upon breath and/or body temperature, as well as breathing patterns (and their varied  
16 effects upon breath testing and more particularly the Intoxilyzer) in questioning a  
17 proffered defense expert and/or criminalist from the crime lab. However, if one

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26 <sup>3</sup> During the hearing the actual ratio was established to be closer to 2300 - 2400:1,  
27 which would necessarily mean that breath *under-estimates* alcohol concentration  
28 by approximately 10%. See transcript at p.23.

1 simply applies the same logic of *Guthrie* to these factors (as well as partition ratio)  
2 such testimony may not be offered unless there is evidence of the individual  
3 Defendant's actual temperature and or breathing patterns at the time of the test. See  
4 Rule 403 and *Guthrie*.

5  
6  
7 **CONCLUSION**

8         The issues presented in this Petition are appropriate for special action relief.  
9  
10        The trial court abused her discretion when she improperly indicated that she would  
11 allow the Defendants to use evidence and arguments regarding body temperature,  
12 breathing patterns, breath to blood partition rations, or other variable other than  
13 instrument "margin or error", in direct contradiction to controlling authority from the  
14 Arizona Court of Appeals - which also makes this issue a matter of critical statewide  
15 importance.  
16  
17

18         Any testimony regarding the conversion of breath alcohol concentration to  
19 blood alcohol concentration is irrelevant in a DUI prosecution pursuant to *Guthrie*  
20 *v. Jones*, 202 Ariz. 273; 43 P.3d 601 (App. 2002), unless adequate foundation is laid  
21 indicating that *these particular* Defendants have been independently tested and  
22 actually do fall within the portion of the population that differs from the statical  
23 population norm of 2100 to 1. If the Defendants fail to establish sufficient  
24 foundation by competent evidence, then this Court should preclude any referral to  
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1 the term partition ratio, introduction of partition ratio evidence or testimony  
2 concerning partition ratio conversion. Lastly, the State submits that any such  
3 testimony is scientifically invalid and fails to meet the foundational requirements of  
4 Rule 702.  
5

6  
7 Further, *Guthrie* and *Storholm*, taken together, tell us that partition ratios,  
8 hematocrit, breathing patterns and body/breath temperature are not at all relevant to  
9 the DUI charge unless the State requests the benefit of the statutory presumption of  
10 impairment in A.R.S. §28-1381(G). The State, in both of these cases, has indicated  
11 that it would not do so.  
12

13  
14 There is scientific proof and a physiological reason why an individual's  
15 venous BAC and arterial BAC would not be identical. The Arizona statute is written  
16 so that either a blood test or breath test standing on their own can be presented as  
17 evidence of the per se DUI charge. The court of appeals has ruled that individual  
18 physical differences are *completely irrelevant* in a per se BAC(A)(2) trial, and *may*  
19 *be relevant, only if the State wishes to take advantage of the presumptions in a*  
20 *standard (A)(1) count*, which as indicated, will not be done here. The State thus  
21 objected to any "hypothetical" testimony relating to these Defendants' individual  
22 physical characteristics in relation to the results of their breath tests. This type of  
23 "hypothetical" testimony is not supported by the applicable case law.  
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1 Based on the foregoing, the State respectfully requests that this Court accept  
2 jurisdiction over this Petition for Special Action and overturn the trial court's  
3 decision to allow the Defendants' use of the proffered evidence. This Court should  
4 tell the trial court that it must follow the decisions from the Arizona Court of  
5 Appeals, in *Guthrie v. Jones, supra*, as well as *State v. Storholm, supra*; in that  
6 individual physiological or environmental characteristics are irrelevant in a per se  
7 DUI/BAC (A)(2) prosecution and are only admissible in a DUI (A)(1) prosecution  
8 where an individual defendant produces evidence of that individual's own  
9 characteristics, despite the trial court's finding or view that the Defendants should  
10 be able to challenge the State's evidence in any manner whatsoever.  
11  
12  
13  
14

15 RESPECTFULLY SUBMITTED this 8<sup>TH</sup> day of November, 2011.  
16

17 STATE OF ARIZONA  
18

19 By   
20 William F. Mills  
21 Attorney for the State  
22

23 Copies mailed, e-mailed and/or delivered this  
24 \_\_\_\_\_ day of November, 2011, to:

25 The Honorable \_\_\_\_\_  
26 Pima County Superior Court  
27

28 *See next page for further routing...*

1 The Honorable Wendy A. Million  
2 Tucson City Court

3  
4 Stephen Neimiec  
5 Russell Hughes  
6 Assistant City Public Defenders  
7 Tucson City Public Defender  
8 103 E. Alameda - Suite 601  
9 Tucson, AZ 85701

10 James Nesci, Esq.  
11 216 N. Main Ave  
12 Tucson, AZ 85701

13 WFM /vd/sb

14  
15 Re: *State v. Cooperman & Griffin*  
16 Complaint for Special Action  
17 No. \_\_\_\_\_  
18 City Court Cause No. 10061595, 10081122

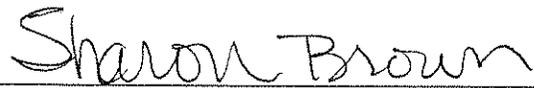
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22 Cooperman/Griffin.1/SB4-B-11/11(L/VD/Special Action Super Ct\Cooperman & Griffin\_Petition\_Special Action)

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**CERTIFICATE OF COMPLIANCE**

This Petition for Special Action complies with Rule 7(e) of the Arizona Rules of Procedure for Special Action. This Petition for Special Action was prepared in a Times New Roman proportionately spaced typeface of 14 points, is double-spaced with the exception of quotations and footnotes, and contains a word count of 8713.



Sharon Brown  
Legal Secretary  
Tucson City Prosecutor's Office  
Notary Public

# **EXHIBIT # 7**

FILED  
PATRICIA A. NOLAND  
CLERK, SUPERIOR COURT

2011 NOV 16 AM 8:37

ARIZONA SUPERIOR COURT  
PIMA COUNTY

BY: R. ST. GERMAINE, DEPUTY

HON. JOHN S. LEONARDO

CASE NO.: C-20117903

COURT REPORTER: NONE

DATE: November 15, 2011

STATE OF ARIZONA,  
Plaintiff,

vs.

TUCSON CITY COURT and the  
HONORABLE WENDY A. MILLION,  
A Special Magistrate thereof,  
Defendant Court,

JOSEPH COOPERMAN  
HEATHER GRIFFIN  
Real Party in Interest/Defendant.

---

SPECIAL ACTION R U L I N G

---

The court has read and considered State's Complaint for Special Action. The state asserts pursuant to Rule 3 of the Rules of Procedure Special Actions, that the Defendant Magistrate has acted without and in excess of her jurisdiction and legal authority and that her actions were arbitrary, capricious and an abuse of discretion in her ruling issued August 30, 2011. The court finds that there is no equally plain, speedy, and adequate remedy available by appeal, and accepts jurisdiction of this Special Action.

Victoria L. Vasquez  
Judicial Administrative Assistant

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Page 2

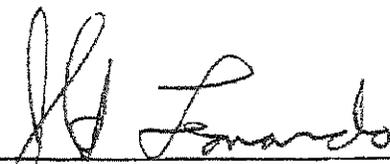
November 15, 2011

C-20117903

Following a review of the pleadings and record, the court finds that the Defendant Magistrate has not exceeded her authority or jurisdiction and that her ruling was not arbitrary, capricious or an abuse of discretion. The court further finds that the ruling is thorough, well considered and consistent with the evidentiary record and cited case law.

Therefore, the court denies the relief requested and CONFIRMS the ruling of the Defendant Magistrate.

DATED: Nov. 15, 2011

  
\_\_\_\_\_  
Hon. John S. Leonardo

- JS* cc: Hon. John S. Leonardo
- WM* Hon. Wendy A. Million – Tucson City Court
- WFM* William F. Mills, Esq. – City Attorney's Office
- SN* Stephen Neimiec, Esq./Russell Hughes, Esq. – City Defender's Office
- JN* James Nesci, Esq.
- TC* Tucson City Court – TR#10061595 and TR#10081122

Victoria L. Vasquez  
Judicial Administrative Assistant

# **EXHIBIT # 8**

VP

(M)

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 Firm No. 197900

FILED  
 PATRICIA A. NOLAND  
 CLERK

11 NOV 17 PM 2:01

C. LARRIBAS, DEPUTY

IN THE SUPERIOR COURT OF THE STATE OF ARIZONA  
 IN AND FOR THE COUNTY OF PIMA

STATE OF ARIZONA, )  
 )  
 Petitioner/Appellant, )  
 v. )  
 )  
 Honorable JOHN S. LEONARDO, )  
 Judge of the Superior Court )  
 Respondent/Appellee, )  
 )  
 )  
 JOSEPH COOPERMAN, (only) )  
 Real Party In Interest, )  
 )  
 Respondent/Appellee )  
 )

NO.  
 Pima County Superior  
 Court No. C 2011 7903  
 Tucson City Court Cause No.  
 TR 10061595

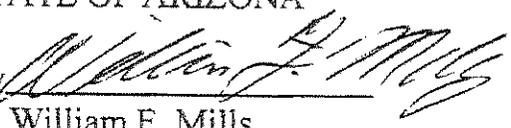
NOTICE OF APPEAL

*Appeal*

Notice is hereby given that the above named Petitioner/Appellant, State of Arizona, appeals to the Court of Appeals of the State of Arizona from the Order (Special Action Ruling), of Judge John. S. Leonardo made and entered in this action on the 16<sup>th</sup> day of November, 2011, finding that the lower court magistrate had not exceeded her authority or jurisdiction and that the ruling below was not arbitrary, capricious or an abuse of discretion, denying the relief requested and confirming the ruling below.

Dated this \_\_\_\_ day of November, 2011.

STATE OF ARIZONA

By 

William F. Mills

Attorney for the State

Copies mailed, e-mailed and/or delivered  
this \_\_\_\_ day of November, 2011, to:

Clerk Of Superior Court  
Honorable John S. Leonardo  
Judge of Superior Court

Stephen Neimiec  
Assistant City Public Defender  
Tucson City Public Defender  
103 E. Alameda - Suite 601  
Tucson, AZ 85701

James Nesci, Esq.  
216 N. Main Ave  
Tucson, AZ 85701

## CERTIFICATE OF SERVICE

WILLIAM F. MILLS hereby certifies that he is a Principal Assistant Prosecuting Attorney for the Tucson City Prosecutor's Office, and that on the \_\_\_ day of November, 2011, he caused to be filed, sent by e-mail, or delivered or mailed the following:

### NOTICE OF APPEAL

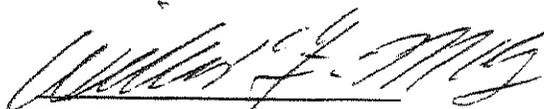
That the original of the foregoing document was filed with:

CLERK OF SUPERIOR COURT  
Honorable John S. Leonardo  
Judge of Superior Court

That on November \_\_\_ 2011, one copy of the foregoing document was mailed/delivered/faxed or e-mailed to:

Stephen Neimiec  
Assistant City Public Defender  
Tucson City Public Defender  
103 E. Alameda - Suite 601  
Tucson, AZ 85701

James Nesci, Esq.  
216 N. Main Ave  
Tucson, AZ 85701



William F. Mills  
Attorney for the State

WFM/VRD/sb

Cooperman.J.1/SB4-B-1111/(VD\Court of Appeals\Cooperman\_Notice\_of\_Appeal\_Special Action)