In The

SUPREME COURT

Of The State of Arizona

MICHAEL FLOYD GUTHRIE, Petitioner, vs. THE HON. MICHAEL D. JONES, Judge of the Superior Court of Maricopa County, Respondent Judge, STATE OF ARIZONA, Real Party in Interest.	No. CV-02-0148-PR COURT OF APPEALS No. 1 CA-SA 01-0312 MARICOPA COUNTY SUPERIOR COURT No. LC 2001-000121

BRIEF OF AMICUS CURIAE ARIZONA ATTORNEYS FOR CRIMINAL JUSTICE

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FACTUAL BACKGROUND

The state's breath testing machine assumes a "conversion ratio" of 2100 to 1 and makes its calculations concerning the defendant's alleged alcohol concentration upon that formula. *See*, "Abstract," U.S. Patent 3,792,272, February 12, 1974, March 8, 1993 ("The system determines, *through Henry's law*, the blood content of alcohol ...") (Emphasis added). (A copy of said Abstract is appended hereto for the Court's convenience.)

Henry's Law assumes a state of equilibrium between volatile liquids and the gases above those liquids and defines at that state of equibibrium the distribution of a substance (such as alcohol) between two media (such as blood and air).[1] In the context of forensic breath/blood analysis, this assumed state of equilibrium translates to an internal, algorithmic assumption that the subject being testing is in the fully post-absorptive state; *i.e.*, that a state of equilibrium has been reached between the volatile liquids (alcohol & water in the blood) in the alveolar region of the human lungs. While the state may continue to politicize science by arguing that the actual amount of alcohol in a subjects blood is now irrelevant under the 1.0 gram alcohol/210 liter of breath standard, the test result is based on an assumed partition ratio of 2100:1 within the functionality of the IR 5000. Moreover, the partition ratio inherent in the operation of the machine is evidenced by documents on file with the Arizona Department of Health Services. All presently approved quantitative breath testing instruments are based upon this ratio ..." In other words, the "breath standard" does nothing more than restate the "blood standard" because "grams of alcohol per one-hundred mililiters of blood" **equals** "grams of alcohol per two-hundred

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[1] Hlastala, Michael P., The Alcohol Breath Test -- A Review, *J. Appl. Physiol.* 84(2): 401-408 (1998)

ten liters of breath."

Should this Court remand this matter to the trial court for a more complete record, expert testimony will establish that the partition ratio used by this machine does not necessarily reflect the defendant's partition ratio either at the time of driving or at the time of testing. More importantly, expert testimony will establish that the utilization of this particular partition ratio can result in an over-estimation of a person's actual blood alcohol concentration by as much as 50% if the test subject is in the absorptive phase. *See*, Fuenning v. Superior Court, 139 Ariz. 590, 599, 680 P.2d 121, 130 (1983). *See, also*, Absorption, Distribution and Elimination of Alcohol: Highway Safety Aspects, K, Dubowski, J. *Stud. On Alcohol Supp No. 10:98* (1985) (Partition ratios in 99.7% of population will range between 1706:1 to 3063:1 in the post-absorptive state.)

RELEVANCE OF PARTITION RATIO EVIDENCE TO THE 28-1381(A)(1) CHARGE

THE ISSUE OF PARTITION RATIO VARIABILITY, BETWEEN DIFFERENT INDIVIDUALS, OR WITHIN THE SAME INDIVIDUAL AT DIFFERENT TIMES, IS RELEVANT UNDER 28-1381(A)(1) REGARDLESS OF WHETHER THE STATE SEEKS TO TAKE ADVANTAGE OF THE 28-1381(G) PRESUMPTIONS AND REGARDLESS OF WHETHER DEFENDANT MAKES A SHOWING THAT THEIR INDIVIDUAL PARTITION RATIO DIFFERED FROM THE STANDARD 2100:1 RATIO TO A SIGNIFICANT DEGREE

The Guthrie Court held, "In a traditional DUI prosecution under § 28-1381(A)(1), however, when the State uses breath test results to take advantage of the § 28-1381(H) (now §

28-1381(G)) presumption, partition ratio evidence may be relevant to rebut that presumption and thus admissible." Guthrie v. Jones, 370 Ariz. Adv. Rep. 40, 42-43 (Div. 1, 2002) The Guthrie Court also states: "One means to prove that a particular defendant was not under the influence of intoxicating liquor while driving, despite a breath alcohol reading exceeding .10, **is to establish that the defendant's individual partition ratio differed from the standard 2100:1 ratio** to a significant degree." Id. At 42. (Emphasis supplied). If left as a published appellate opinion by this Court, lower courts will look to Guthrie as (A) only allowing partition ratio evidence when the state seeks the presumptions of 28-1381(G) and (B) compelling a Defendant to show his actual blood-to-breath partition ratio at the time of driving.

It is difficult to imagine any scenario under which the actual amount of alcohol in a person's blood would not be relevant to that person's degree of impairment under the "(A)(1)" charge. This is true regardless of whether the state seeks to avail itself of the statutory presumptions of 28-1381(G) because the issue of impairment is a separate, substantive element of 28-1381(A)(1).

Unlike California, where a DUI suspect is given the choice of testing methodology, in Arizona the police officer determines the test or tests to be given. Asking the Defendant to show his actual blood-to-breath partition ratio is impossible unless the state elects to administer simultaneous breath and blood tests. Even a blood test administered several hours after the breath test will avail an accused nothing, because partition ratio varies from individual to individual and within the same individual over time. *See*, State v. Hanks, 772 A.2d 1087 (VT, 2001).

In short, placing a burden on the Defendant to prove his actual blood-to-breath partition ratio and the time of a breath test sequence is unrealistic, unfair and violative of Due Process.

Requiring the Defendant to show his actual partition ratio at the time of testing also impermissibly shifts the burden to the Accused. *See*, In re Winship, 397 U.S. 358, 90 S.Ct. 1068, (1970), Mullaney v. Wilbur, 421 U.S. 684, 95 S.Ct. 1881, (1975); Sandstrom v. Montana, 442 U.S. 510, 99 S.Ct. 2450, (1979). Each of these United States Supreme Court decisions holds that as a matter of federal constitutional due process, the state is required to prove every fact necessary to constitute the crime charged beyond a reasonable doubt. *See also,* State v. Garcia, 152 Ariz. 245, 731 P.2d 610 (App. Div. 1 1986).

The Defendant need not prove that he was not "Impaired to the Slightest Degree" while driving. The Defendant need not come forward with any evidence whatsoever.

As the Guthrie Court correctly points out:

> Partition ratios translate the amount of alcohol in a person's breath into the amount of alcohol in that person's blood. 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 ...

A criminally accused enjoys a right to confront and cross examine his accuser. When impeaching an adverse witness on the issue of motive, bias or interest, the Defendant need not show that such adverse witness is, *in fact*, lying. He need only show that the witness has a motive to lie; That he might be lying.

The state's breath testing machine is a witness against the accused in a DUI case. The Defendant need not show that the machine *was* in error with respect to a particular alcohol

concentration reading. The Defendant need only show, and has a Confrontation and Due Process right to show, that the machine *may* have been in error. *See,* Davis v. Alaska, 415 U.S. 308, 315-316, 94 S.Ct. 1105, (1974), Delaware v. Van Arsdall, 475 U.S. 673, 680, 106 S.Ct. 1431, 1436, (1986) ("a criminal defendant states a violation of the Confrontation Clause by showing that he was prohibited from engaging in otherwise appropriate cross-examination designed ... 'to expose to the jury the facts from which jurors ... could appropriately draw inferences relating to the reliability of the witness'. " (*quoting* Davis, 415 U.S. at 318, 94 S.Ct. at 1111).
The machine is a witness against the accused. This Court has never tolerated trial by machine. *See, e.g.*, Fuenning, *supra*, and it must not do so now.

CONCLUSION

Accordingly, the Defendant enjoys a right to impeach the state's machine based on potential, inherent errors in the measurement process. He need not wait for the state to use the presumptions of 28-1381(G) and need not offer evidence of his actual partition ratio at the time of driving or testing! Even if this Court were to adopt the reasoning of the Court of Appeals that partition ratio evidence is irrelevant as to the *per se* charge of having a prohibited alcohol concentration under A.R.S. 28 - 1381(A)(2), such evidence is clearly relevant to the issue of impairment under A.R.S. 28-1391(A)(1).